STUDY TO EVALUATE THE USE OF MAIL SERVICE PHARMACIES

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EXECUTIVE SUMMARY

A. Study Purpose and Methods

Under section 202 of the Medicare Catastrophic Coverage Act of 1988 (MCCA), the Secretary of Health and Human Services (HHS) was mandated to evaluate the potential use of mail service pharmacies to reduce costs in the delivery of prescription drugs under the new outpatient prescription drug benefit. The Health Care Financing Administration (HCFA) funded a cooperative agreement to Brandeis University and the University of Maryland Center on Drugs and Public Policy, to conduct the study. Three sources of data were used: (1) existing published and unpublished literature on mail service pharmacies; (2) primary data collection through a mail questionnaire and follow-up site visits to a sample of mail service pharmacies; and (3) phone inquiries to selected State pharmacy regulatory boards.

B. Major Findings

Private Mail Service Pharmacy Industry

- The distribution of firms by size, whether it be characterized by annual sales or number of prescriptions dispensed, is very skewed. The two largest firms are responsible for approximately two thirds of both dollar sales and number of prescriptions dispensed.

- The majority of customers come to mail service pharmacies from group contracts with employers and insurers/third-party administrators. Individual customers who are not associated with group contracts are a very small portion of their business with only one firm marketing directly to individual customers.

- Individuals over 65 years old represented over 50 percent of the sales in mail service pharmacies despite the predominance of employer contracts. This reflects use of mail service pharmacies under retiree health benefits.

- Despite the existence of several firms for more than 10 years, mail service pharmacy is an emerging industry experiencing rapid growth. More than half of the firms have been in the business less than 5 years. Younger firms are smaller and experienced relatively more rapid growth than their older and larger counterparts.

Operational and Administrative Characteristics

- Contracts between mail service pharmacies and their clients specify consumer cost-sharing arrangements and a maximum days supply. Cost sharing generally takes the form of a flat copayment. Most contracts provide for dispensing a 90-day maximum supply.

- Contracts also include a negotiated reimbursement formula. The majority of customers are covered by a contract which specifies the reimbursement formula to be average wholesale price (AWP) less a percentage discount plus a dispensing fee. Since mail service pharmacies rarely sell directly to the consumers, the concept of a "usual and customary price" is not relevant when discussing pricing formulas for mail service pharmacies.

- The production facilities of mail service pharmacies concentrate on processing new and renewal prescriptions for maintenance drugs. The scale of operations permits the implementation of highly efficient production-line techniques for dispensing most prescriptions.

- The computer systems of mail service pharmacies performed all the functions routinely performed by computers in community pharmacies. Because of their scale of operations, mail service pharmacies can support extensive equipment providing flexibility in their processing, capacity for large files and back-up equipment for disaster recovery.

Cost and Efficiency Issues

- Mail service pharmacies were not willing to provide data requested in this study that would allow assessment of the potential cost savings to Medicare from use of mail service pharmacy.

- Comparison of prescription costs across practice settings such as community pharmacy versus mail service pharmacy must be made with caution. Prescription costs are affected by several variables other than practice setting such as: type of prescriptions filled; average days supply per prescription; generic fill rate; variance in State drug product selection laws; coverage rules and quantity of third-party paid prescriptions; and volume discounts negotiated with third-party payers.

- Mail service pharmacies responding to the survey averaged: $42.32 per prescription; 2.2 prescriptions per order processed; 76.7 days supply per prescription; and $.561 charge per days supply. The literature provides some comparative averages for community pharmacies: $15.19 per prescription; 26 days supply per prescription; and $.584 charge per days supply. Although large firms versus small mail service firms had similar averages for these variables, there were considerable variations across the total sample of mail service firms responding to the survey.

- The average charge per days supply found among mail service firms in this study does not appear to be substantially different from the average charge per days supply found among retail community pharmacies in the literature.

- Mail service firms exhibited lower operating expense as a percentage of gross sales than community pharmacies for employee expenses and rent or interest on facilities. Mail service firms had higher expense as a percentage of gross sales for shipping and handling costs.

- Mail service pharmacies appear to have greater operational efficiency and resulting lower cost in certain areas, compared to community pharmacies, including: higher rate of automated dispensing; lower employee, facility, and inventory carrying expenses as a percent of gross sales; and greater use of generics.

- Mail service firms incur shipping and handling costs not experienced by community pharmacies.

- The MCCA payment plan should minimize generic fill rate differences between mail service and community pharmacies because of incentives it provides for generic substitution.

Quality Issues

- The source for drug products dispensed by mail service firms are major pharmaceutical manufacturers.

- Mail service pharmacies appear to adhere to the Standards of Practice related to the process of dispensing a prescription.

- Mail service pharmacies appear to be taking reasonable steps to provide appropriate written information with

prescriptions and the opportunity for follow-up information by telephone.

Legal Issues

- Mail service pharmacies are regulated by the board of pharmacy in the State in which the dispensing facility is located. Of particular importance are regulations related to the use of technical (nonlicensed) personnel, generic substitution, and occasionally, patient information and counseling. Most State boards assert the authority to regulate out-of-State mail service pharmacy facilities if they mail into the State, but enforcement is impractical and problematic.

Pharmacy Concerns Regarding MCCA

- Mail service pharmacy concerns about the MCCA relate to two areas: being a provider of pharmacy services and becoming a participating pharmacy. Concerns regarding provision of pharmacy services include: marketing to individuals, rather than groups; the 30-day supply limit; and biannual pricing updates. Concerns regarding participation include: allowance of batch processing and response time of the electronic point-of-sale system.

C. Conclusions/Recommendations

- Mail service pharmacies appear to have greater operational efficiency and resulting lower cost in certain areas, compared to community pharmacies. They also will probably interface with the MCCA electronic point-of-sale system in a batch processing mode, which should result in lower overhead costs than a community pharmacy on-line system. However, mail service pharmacies incur shipping costs not experienced by community pharmacies, and incentives in the MCCA payment plan should minimize cost differences that result from generic fill rate differences between community and mail service pharmacies.

- Qualitative information obtained from the survey suggests mail service pharmacies have higher average profit margins than community pharmacies.

- The payment formula used in many mail service pharmacy group contracts, AWP less a discount plus an administrative fee, suggests that actual drug product acquisition costs for many mail service pharmacies are well below AWP. However, the amount of such discounts could not be

determined in this study. While the MCCA prohibits considering pharmacy discounts in determining the unit average price for drug products, the average amount of mail service pharmacy discounts could be considered in determining an appropriate administrative allowance for mail service pharmacies.

- Because this study was not successful in getting sufficient quantitative information to determine actual acquisition or overhead costs, mail service pharmacies should be included in the General Accounting Office's studies to determine overhead costs of community pharmacies and discounts given to third-party insurers, as required by section 202(k)(2) of the MCCA.

CHAPTER I

BACKGROUND

A. Purpose

The Medicare Catastrophic Coverage Act of 1988 (MCCA) mandates the Secretary of Health and Human Services (HHS) to report to Congress by January 1, 1990, on the results of a study "to evaluate the potential to use mail service pharmacies to reduce costs to the Medicare program and Medicare beneficiaries" (section 202(k)(1)(B)). The mail service pharmacy industry was also singled out in the section 202(b)(3)(B) MCCA insert to section 1834(c)(4)(B) of the Social Security Act) for special consideration regarding payment in the outpatient drug program. This insert states that, "The Secretary may, by regulation and after consultation with pharmacists, elderly groups, and private insurers, reduce the administrative allowances established under subparagraph (A) for any drug dispensed by a mail service pharmacy (as defined by the Secretary) based on differences between such pharmacies and other pharmacies with respect to operating costs and other economies."

The Health Care Financing Administration (HCFA) funded a cooperative agreement to Brandeis University and the University of Maryland Center on Drugs and Public Policy, to conduct the study.

The study results reported here provide an overview of the mail service pharmacy industry. The major focus of the analysis is on cost issues; however, cost factors alone are not sufficient when evaluating the potential role of mail service pharmacies in the MCCA outpatient prescription drug program. The current role of mail service pharmacies in the delivery of prescription drugs in the United States, with a particular emphasis on the elderly population, is described. Quality issues related to both the quality of drug products dispensed and the quality of pharmaceutical services delivered are examined. Legal implications are reviewed, with special consideration of State regulatory requirements. The potential ability of mail service pharmacies to comply with certain provisions of the MCCA is also discussed.

B. Outpatient Prescription Drug Benefit Under the MCCA

The MCCA provides for reimbursing the bulk of outpatient prescription drugs for Medicare beneficiaries beginning on January 1, 1991. The following provisions of the MCCA with regard to outpatient prescription drugs are relevant to this study:

- Beneficiaries will be subject to an annually increasing deductible and annually decreasing coinsurance, which will be 20 percent beginning in 1993. HHS is required to establish an electronic point-of-sale claims processing system to track drug purchases by beneficiaries to determine deductible status.

- The payment formula differs depending on whether the drug product is a single source or multiple source product and is designed to favor generic substitution. A multiple source drug product is considered to have a restrictive prescription only if the physician writes in his own handwriting that a particular brand must be dispensed.

  1. Payment for a multiple source drug product without a restrictive prescription will be the lesser of the actual charge for the drug product or the sum of the number of dosage units dispensed times the unit average price, plus an administrative allowance. Each distributor of a multisource drug product will have its own AWP or comparable direct price for a drug product. The unit average price represents the unweighted median of the different distributors' AWP or comparable direct price for the same multisource drug product.

  2. Payment for a single source drug product or a multiple source drug product that has a restrictive prescription will be the lesser of: (1) the 90th percentile of actual pharmacy charges for the drug product for the second previous payment calculation period; (2) the sum of the number of dosage units times the unit average price for the drug product dispensed, plus an administrative allowance; or (3) the actual charge for the drug product.

- Unit average prices will be updated biannually through a survey of direct sellers, wholesalers, or

pharmacists, as appropriate, or or in certain circumstances, using published sources. Wholesalers or direct sellers of covered outpatient drug products will be required to take part in the survey, if requested by HHS, and will be subject to civil penalties for refusal to provide requested information or for providing false information. The unweighted median average price for a particular multiple source drug product will be based on the AWP or comparable direct price in the three nationally recognized price listings: the Red Book published by Medical Economics, the American Druggist Blue Book, published by the Hearst Corporation, and Medi-Span, the price list published by Medi-Span, Inc.

- Participating pharmacies and nonparticipating pharmacies will receive $4.50 and $2.50, respectively, per prescription to cover administrative costs. After consultation with the elderly, pharmacies, and private insurers, HHS can reduce the administrative allowance for mail service pharmacies by regulation based on differences between these pharmacies and other pharmacies, with respect to operating costs and other economies.

- The Secretary of HHS is prohibited from implementing a formulary or excluding a class of drugs.

- HHS is required to establish a program to identify and correct utilization and quality problems, including: (1) unnecessary or inappropriate prescribing or dispensing practices; (2) substandard care; and (3) potential adverse drug reactions.

- A participating pharmacy must be licensed under State law, must offer to counsel, or offer to provide information regarding drug use, and must advise the beneficiary on the availability of generics. The participating pharmacy must submit information on all drug product purchases by beneficiaries through the electronic system.

- Payment can be made on an assigned claims basis (assignment) only to participating pharmacies. Participating and nonparticipating pharmacies will be prohibited from charging Medicare beneficiaries more than they charge the general public. If a pharmacy decides not to participate, it will arrange for payment

from the patient, leaving the patient to pursue reimbursement of any covered amount from Medicare.

- Payment will generally be limited to a 30-day supply, although the Secretary of HHS may authorize payment for up to 90 days (or beyond in exceptional circumstances).

C. Historical Perspective on the Industry

Prescriptions have been provided by mail in the United States for over a century, although historically this practice existed primarily for delivery in rural or remote areas. The mailing of prescription drugs was performed by community- or hospital-based pharmacies and was seen as a necessary service for the patient. Pharmacies which dealt primarily in prescriptions by mail did not exist (Ascione and Kirking, 1988).

The first mail service pharmacy began in 1946 when the Department of Veteran's Affairs (DoVA) mailed prescription drugs at no charge to eligible veterans. Currently, the DoVA accounts for one-third of all prescriptions provided by mail service pharmacies. In 1959, the American Association of Retired Persons (AARP) and the National Retired Teachers Association formed a nonprofit mail service pharmacy for their membership. For-profit companies followed in 1963 and began to market to corporate, union and government employers. The 1960s witnessed growing opposition to the mail service concept by many pharmacy associations (Glaser, 1984; Ascione and Kirking, 1988).

The most rapid growth of mail service pharmacies has occurred during the 1980s, particularly in the last 4 to 5 years. Mail service pharmacy sales have grown from less than $100 million in 1981 to a projected $1.5 billion in 1989 (Konnor, 1989). The mail service market has been estimated to currently account for about 6 percent of the outpatient prescription drug market (Konnor, 1989) and is expected to grow at an annual rate of 30 percent through the early 1990s (Frost and Sullivan, 1989). Mail service pharmacies focus on the delivery of maintenance medications which currently account for about 70 percent of prescription drug sales; thus, their potential market is enormous.

In the past 5 years, there have been many new entrants to the mail service market, including both mail service only

companies and traditional pharmacies, usually large chains, which developed a mail service component. During the same time, many of the largest for-profit mail service companies underwent ownership changes through mergers and acquisitions.

Employer interest has fueled the growth of the for-profit mail service pharmacies, which have marketed their services primarily as a means of cost containment without quality reduction. Employer concerns relate to two factors: the costs of prescription drugs are rising faster than other medical costs, and the increasing number of retirees means more maintenance drugs will be used.

In summary, mail service pharmacies currently constitute a relatively small part of the prescription drug market; however, they are a rapidly growing industry. In just 30 years, they have become a viable alternative delivery system for maintenance prescription drugs. How mail service pharmacies are treated under the MCCA will have major implications for the industry because Medicare beneficiaries, relative to their population size, are disproportionate users of maintenance drugs and comprise a significant portion of the mail service business.

CHAPTER II

DATA AND METHODS

A. Data Sources

Three sources of data were used in the study: (1) existing published and unpublished literature on mail service pharmacies, (2) primary data collection through a mail questionnaire and follow-up site visits to a sample of mail service pharmacies, and (3) phone inquiries to selected State pharmacy regulatory boards.

The following types of literature were reviewed: (1) pharmacy journals, (2) business journals, and (3) unpublished reports. The first two sources provided an overview of the issues related to mail service pharmacies. Review of these articles allowed a documentation of the history and growth of the industry, an understanding of the controversies regarding the mail service concept from organized pharmacy, and an appreciation of employer and consumer issues in choosing a mail service option. Quantitative studies evaluating mail service pharmacies are in general unpublished and have been conducted by organizations that have an interest in the results of the study. We attempted to identify and review critically all such studies.

B. Identification of the Universe of Mail Service Pharmacies

The sampling frame for the primary data collection effort was the universe of mail service pharmacies, exclusive of the Department of Veterans Affairs. In order to identify the universe, we developed a list of 51 potential mail service pharmacies from several sources, including the National Association of Mail Service Pharmacies, the National Council on Prescription Drug Programs, and the journal, Drug Topics. As noted previously, the industry is growing rapidly with respect to new entrants to the market and it is possible that some of the newer and smaller entrants were not identified.

All 51 pharmacies were telephoned in order to: (1) verify that they were a mail service operation; (2) determine their willingness to participate in the primary data collection effort if they were selected into the sample; and (3) establish appropriate criteria for developing a stratified sampling design.

The results of the telephone inquiry of the 51 companies are:

- Twelve companies were not in the mail service business, reducing the estimate of the universe to 39 companies (see Appendix A for a complete listing).

- Two firms refused to indicate whether they were a mail service pharmacy, and three firms were not reached, despite several follow-up calls. These companies were classified as nonrespondents and remain in the listing of the universe because their names indicate that it is likely that they are in the mail service business.

- Based on a review of the literature, we believe that all major mail service pharmacies responded to the telephone inquiry, and that the five nonrespondents represent marginal or new firms. Characteristics of the 34 responding companies are described in Chapter IV.

- Among the 34 companies who responded to the telephone inquiry, 23 indicated that they would definitely be willing to participate in the primary data collection effort. Of the remaining companies, 6 indicated that they definitely would not participate, 5 said they would probably not participate, and 1 indicated that they might consider participation.

- Four of the 23 potential participants were unwilling to provide size information in terms of either total number of prescriptions dispensed annually or annual dollar sales and, thus, were eliminated from further consideration. Because of the short timeframe of the study, the 19 companies which indicated a definite willingness to participate and provided size information became the sampling frame for the primary data collection effort.

C. Sample Design

Among the 19 potential participants, 1 was selected as a pretest for the mail survey and follow-up site visit, and 9 were selected into the sample on the basis of a stratified random design. Pharmacies were placed into three stratum, based on size of operation:

- Large - dispensed in excess of one million prescriptions in 1988, or had sales in excess of $50 million.

- Medium - dispensed less than one million prescriptions in 1988 and had sales between $10 million and $50 million,

- Small - 1988 sales were less than $10 million.

According to this classification, and through random selection, nine pharmacies (five large, two medium, and two small) were selected into the sample. The sample size was constrained to nine pharmacies because of the short timeframe allowed for the study and the requirement of preclearance of the survey instrument by the Office of Management and Budget if more than nine firms were surveyed. Two of the nine originally selected pharmacies were unable to complete the questionnaire in the specified timeframe and withdrew from the study. These two pharmacies were replaced by other pharmacies in the same size category. To maintain anonymity in the reported results, and to create some semblance of a sample for comparing large and small pharmacies, the medium and small groups were aggregated into a single group.

D. Mail Questionnaire

A survey instrument was developed to obtain the information necessary to respond to the specific purpose of the study. The questions in the survey were divided into 10 groupings:

- Size and Complexity of Organization
- Contract Options
- Operating Procedures
- Drug Entities Dispensed
- Prescription Operations
- Patient Counseling
- Communication with Physicians
- Financial Data
- Computer Applications
- Prescription Costs

The questionnaire was pretested, and several suggestions for improved wording were made. The revised questionnaire, which was sent to the nine pharmacies in the original sample and the two replacement pharmacies, is contained in Appendix B.

We were aware of the confidential nature of some of the questions, particularly the financial and cost questions. In a cover letter to the selected pharmacies, we assured them that their identity as a participant was confidential and that in the report, data would be presented in aggregate form so that information on individual mail service pharmacies could not be obtained.

Except for the two pharmacies which withdrew because of their inability to meet the report's time schedule, all other pharmacies responded within a reasonable time period and always prior to the site visit, thus enabling the project team to review their responses prior to the visit.

All of the responding pharmacies attempted to answer most questions except for those related to financial information and prescription costs. Despite assurances of confidentiality, only three pharmacies provided complete financial information, including prescription prices and acquisition costs.

Only five of the nine pharmacies provided aggregated financial data. Three other pharmacies provided partial information on aggregate financial data. Four pharmacies provided the information requested on selling price to their largest contract for specific prescribed medicine. A different group of four pharmacies provided the information requested on net acquisition costs. This lack of financial and cost data curtailed the ability to perform the cost and Medicare beneficiary cost impact analyses. This is discussed further in Chapter V.

E. Site Visits

Site visits were made to all nine pharmacies that completed the questionnaire. The site visit team consisted of two persons: a pharmacist from the University of Maryland and a policy analyst from Brandeis University. The site visit consisted of a tour of the pharmacy operations and a structured interview with an appropriate company representative. During the tour, we observed the path that a prescription would follow from the time an order was received to the placement of the processed and packaged order in mailing bins. The purpose of the structured interview was: to clarify responses to the mail questionnaire; to probe in greater depth certain areas which were inappropriate to include in the mail questionnaire because of complexity, or were not included

because of concern about the length of the questionnaire; to encourage reconsideration of mail survey questions to which the pharmacy had not responded; and to provide an opportunity for the selected mail service pharmacies to make their concerns known regarding the MCCA.

F. Strengths and Limitations

The nine mail service pharmacies in the study were generally cooperative and participated willingly in the study. The pharmacies provided very careful responses to the mail questionnaire, which were frequently supplemented by supporting documentation. They clearly spent considerable time and effort in providing responses to the questionnaire and cooperated willingly, even though the timeframe for the study was very short. There is, of course, an incentive for the pharmacy to present themselves in the most favorable light possible in order to obtain the most advantageous treatment by the evaluation group. We have no reason to suspect that any information which was provided in the mail questionnaire was deliberately false or that the operational process was changed because of our presence; however, all of the data is self-reported. Site visits were scheduled well in advance. Thus, while it might be said that the pharmacies had ample opportunity to prepare for our visits, at the same time we were able to query staff in the operations area freely, including both clerical and professional staff. No aspect of the operation was off-limits.

The most severe limitation of the study was the general unwillingness of the pharmacies to share cost and financial data. While the mail service pharmacies repeatedly emphasized that they could deliver maintenance drugs at a substantially lower cost than community pharmacies, we were not provided with adequate data to support this assertion. The reasons cited for not providing the information related to: the highly competitive nature of the mail service business, the position that this information is proprietary, and the concern that, despite good intentions, there was potential for the information to go beyond the members of the study team.

CHAPTER III

LITERATURE REVIEW

A. Cost and Utilization Studies

Studies have yielded conflicting results as to whether mail service programs represent cost savings for prescription drug programs. Mail service pharmacies have the potential to dispense prescriptions at a lower cost as a result of economies of scale, increased generic substitution, volume purchasing and increased efficiency of operations, including careful inventory management. The literature is mixed on whether these lower ingredient and dispensing costs do occur and, if they do, whether they are offset by the costs associated with increased wastage related to dispensing longer days supply. Cost and utilization studies sponsored by a benefits processor and a mail service pharmacy lead to contradictory conclusions regarding the cost saving potential of mail service pharmacies.

Two studies sponsored by Pharmaceutical Card System (PCS), a third-party claims processor which uses a plastic eligibility card for claims submission, conclude that mail service programs result in higher than expected actual charges. Based upon a comparison of PCS clients with a mail service option to a matched group of PCS clients without a mail service option, the first study concludes that the actual charges of the mail service group exceeded expected charges by 5 percent (Sieben, 1986). Expected community pharmacy charges based upon charges incurred by the control group of PCS clients without a mail service option were calculated for clients with a mail service option. Savings due to lower unit costs in the mail service group are more than offset by the costs associated with increased volume for the group, presumably as a result of wastage. The second study is an update of the first study, using a second year's data and essentially replicates the previous results (Sieben, 1987). The major problem with these studies is that they attribute the "excess cost" in the mail service group to the mail service option. Since the studies are not pre-/post-studies and prescriptions filled at the mail service pharmacy represent only a small portion of drugs dispensed, it is possible that the differences between the groups might represent some underlying differences in characteristics or coverage

not accounted for in the study design, rather than the mail service option.

A recent study examines the assumption of the Sieben studies that the higher volume dispensed to customers with a mail service option is due to wastage (Wertheimer and Pipalla, 1989). This study found that 90 percent of the prescriptions for drugs dispensed for chronic conditions were taken by patients for two consecutive quarters. In addition, 78 percent of all prescriptions were continued through 9 months. The study concludes that chronic medications can be dispensed in 90-day supplies, since most maintenance therapies appear to be stable. The study does not, however, address the issue of the number of units wasted when a therapy is discontinued. Clearly, with a larger supply dispensed, the potential exists for a larger number of units to be wasted. This issue is addressed in some of the consumer surveys described later in this review.

Two independent studies commissioned by Medco Containment Company, which operates the largest for-profit mail service pharmacy, conclude that employers and employees save money with mail service pharmacies Gross Townsend Frank, Inc., 1987). In addition to its mail service pharmacy, Medco's wholly-owned subsidiary, Paid Prescriptions, processes prescription drug claims for both community and mail service pharmacies using a plastic eligibility card similar to the PCS card.

The first Medco study compares the cost-effectiveness of mail service prescription plans, major medical plans and third-party prescription card programs (Boston Consulting Group, 1987) (Broshy, 1988). The study uses publicly available data, Medco internal data, and interviews with benefit managers, major insurers, trade associations, and State pharmacy boards. The study concludes that mail service pharmacies are potentially able to save 20-25 percent of total plan costs if all maintenance drugs are processed through the mail. The strength of this study lies in the development of a framework for analysis. The results are sensitive to the assumptions made and the validity of specific numbers used in the study. Some of the assumptions questioned by other readers include the low generic pill rate and the high pricing structure in community pharmacy settings (Ascione and Kirking, 1988).

The second Medco study assesses the cost-effectiveness of integrated mail service/card programs and card-only programs (Mercer-Meidinger-Hansen, 1987a). It analyzes actual employer-sponsored programs pre- and post-introduction of a mail service option. The study concludes that the introduction of an integrated program reduces the cost per cardholder by 5.1 percent, primarily as a result of reduced ingredient costs. The annual rate of increase was comparable for both the integrated and card-only programs. The strength of the study lies in its use of actual claims experience. Several important factors which might influence utilization, such as copayment levels and geographic distribution of the claimants, are not considered in the design of the study. Furthermore, this study, like the PCS study, does not isolate the impact of the mail service component but evaluates an integrated plan.

Several reports from large employers suggest that they believe that mail service pharmacies save them and their employees money (Baker and Sauer, 1988) (Jendlin, 1987) (In Vivo, 1985) (Kroczynski, 1984). One employer, Mountain Bell, commissioned an independent evaluation of its contract with Medco (Mercer-Meidinger-Hansen, 1987b). This study did not, however, specifically address cost and utilization experience but, instead, focused on whether generic drugs were being dispensed whenever possible. Based upon an on-site audit of randomly selected prescriptions, the study concluded that the contract guidelines were being adhered to. In addition, generic drugs were being dispensed whenever possible, but restrictive substitution laws in Nevada precluded a high generic fill rate. The ability to generalize from this study is limited by the size and nature of the sample.

A study sponsored by Blue Cross/Blue Shield of Michigan uses the model developed by the Boston Consulting Group to assess the relative importance of the various cost components in achieving prescription drug savings (Ascione and Kirking, 1988) (Kirking, Ascione and Richards, 1988). The study simulates seven plans which vary across four dimensions: generic fill rate, discount from AWP, days supply dispensed, and administrative fee paid. The study found that increasing the generic fill rate from 0 percent to 25 percent resulted in a 14.2 percent cost savings, increasing the discount from AWP from 0 percent to 10 percent resulted in a 7.8 percent cost savings, increasing the days supply from 24 to 72 days resulted in a

14.6 percent cost savings, and reducing the fee by 25 percent resulted in a 5.5 percent cost savings. The major disadvantage of this study is that the seven specified plans are not directly related to specific community or mail service pharmacy plans. The study does, however, indicate where the potential for cost savings resides and avoids making assumptions on specific program parameters.

B. Consumer Surveys

Several surveys have been conducted of mail service customers to determine not only their satisfaction with the services received but also to determine the extent to which mail service programs increase drug wastage. Other studies have addressed whether patient information leaflets distributed by mail service pharmacies are useful to the patient.

A population-based telephone survey of 300 randomly selected heads of household sought to determine whether users of the mail service pharmacies were as satisfied with the pharmacy services received as users of other types of pharmacies (Roberts and Fitzgerald, 1986). Only 11 percent (or 34 individuals) of those interviewed had used a mail service program. The overall satisfaction rating was slightly higher for the users of the mail service program than for the nonusers. Both groups cited price as the primary reason for their choice of a delivery system. In a second study, in-depth interviews of 13 mail service pharmacy customers confirmed that price was the most important aspect to consumers, with convenience rated second (Weiss, 1986). The study also found that there was confusion as to the nature of mail service plans, that the toll free lines were rarely used, and that most customers preferred a more personal relationship with their pharmacist. The small number of individuals using a mail service pharmacy limits the validity of both these studies.

Two studies sponsored by PCS compare the amount of medication wastage attributable to mail service pharmacies. The first study, based upon a telephone survey of two 300-person samples found that the incidence of wastage was greater for customers of traditional pharmacies, but the average number of tablets discarded was greater for the mail service pharmacies (Consumer Data Bureau, 1986). A second study replicated the methodology and results of the first study and concluded that the total number of wasted

tablets was 2.2 times greater in the group of customers using mail service pharmacies than the group using traditional pharmacies (Gallup, 1986). The first study also asked questions to ascertain the level of satisfaction of mail service customers: 86 percent were very satisfied with the overall experience. Unfortunately, the study did not ascertain the level of satisfaction among the comparison group of nonmail service customers (Consumer Data Bureau, 1986).

Two studies sponsored by AARP evaluate the use of drug information leaflets as an appropriate and effective educational method. AARP operates the largest private, nonprofit mail service pharmacy, Retired Persons Services, dispensing over 10 million prescriptions annually to its members, all of whom are over 50 years old (Enright, 1987) (Schurenberg and Luciano, 1988). AARP has been a strong advocate for the distribution of patient information leaflets covering specific and general drug use and has developed and marketed its own leaflets (Enright, 1987). The first study explores very generally the practices and information levels of Americans over 45 years old using prescription drugs (Pequet, 1983). Among the study's many findings are that the respondents want printed leaflets and that they are willing to pay for the costs associated with the leaflets. Since little documentation of the methodology or survey instrument is included, it is difficult to comment on the validity of this study. A second study focuses more specifically on the drug information leaflet. Using a mail survey of 2,400 elderly mail service customers, study and control groups were used to evaluate leaflets for three different drugs (Morris and Olins, 1984). Of those who said they received a pamphlet, 95 percent read it and 94 percent thought it was slightly, to very, useful. The major shortcoming of this study is that, since there were no study and control groups within a drug category, it made no attempt to evaluate whether customers using leaflets actually increased their knowledge about the drug they were taking.

C. Other Reports

Several consulting and industry reporting groups have estimated the growth of the mail service pharmacy industry. One reports that mail service sales will increase 30 percent per year through 1991 (Codling, 1987). In addition, the report suggests that mail service sales will contribute to broader changes in drug distribution,

resulting in drugstores accounting for only 60 percent of the U.S. dispensing market in 1991. Another report estimates that mail service sales will increase 50 percent per year through 1992 (Eberstadt Fleming, Inc., 1987). The report enumerates five factors that will sustain the growth of the mail service sales: lack of current market penetration, increase in the utilization of outpatient services resulting in an increase in the proportion of drugs that are self-administered, the aging population, the expansion of the current health care cost containment environment, and the increasingly sophisticated and financially constrained consumer population.

Concerns expressed by community pharmacies have generally reflected their apprehension of a new competitor. One concern that has appeared repeatedly in the pharmacy journals is the disruption of the physician-patient-pharmacist relationship. They point to the inability of mail service pharmacists to perform face-to-face counseling about medication interactions with food, over-the-counter products, and other medications. This face-to-face counseling is particularly important to impaired individuals. In addition, since mail service pharmacies provide mostly maintenance medications, patient profiles do not contain information on acute medications. Another area of concern is drug delivery problems. These problems include the use of technicians, delays in obtaining medications, wastage, drug diversion, mistakes in dispensing and labeling medications as a result of production quotas,and damage to product integrity as a result of shipping. Evidence offered in support of these allegations and any subsequent deterioration of patient care is anecdotal. More recently,community pharmacists appear to be accepting the inevitability of mail service pharmacies as a viable delivery system,and trade journals are concentrating on a discussion of how to compete effectively with mail service pharmacies (Tootelian, 1987).

CHAPTER IV

OVERVIEW OF INDUSTRY

Based upon information obtained from the telephone inquiry, the mail service industry can be characterized along a variety of important dimensions, including the size and concentration of firms and the nature of their customer. As a result of this inquiry, 34 mail service pharmacies were identified. Unless otherwise indicated, the following description is based upon information obtained from all 34 pharmacies.

A. Firm Size

Two measurements of firm size were considered: annual sales and number of prescriptions dispensed. Not all firms answered both questions: eight firms answered neither question. The majority of the nonrespondents claimed this information is proprietary. The distribution of firms by size, whether it be characterized by annual sales or number of prescriptions dispensed, is very skewed. We estimate that the two largest firms are responsible for approximately two-thirds of both the dollar sales and number of prescriptions dispensed.

Of the 22 firms providing information, 17 firms (77 percent) dispense fewer than a million prescriptions annually, with 8 of these firms dispensing fewer than 100,000 prescriptions annually. At the other end of the scale, 2 firms dispense in excess of five million prescriptions annually. Similarly with annual sales, of the 24 firms providing information, 17 firms (71 percent) had annual revenues of less than $50 million, with 12 of these firms having annual revenue of less than $10 million. In contrast, 3 firms have annual revenue in excess of $100 million.

B. Customers

Three characteristics of customers were explored: whether customers come to a firm as members of a group; whether customers come to a firm as individuals; and the proportion of sales to customers over 65 years old.

All firms except two indicated that their customers come to them as members of funded groups. Of those reporting that their customers were members of groups, the following categories of groups were identified: employers

(26 firms), private insurers/third-party administrators (24 firms), unions (22 firms), health maintenance organizations (15 firms), preferred provider organizations (13 firms), and Medicaid (3 firms).

While 22 firms (65 percent) indicated they have customers who come to them as individuals, several of these firms indicated that such customers are a very small portion of their business. Only 2 firms sell exclusively to individual customers not associated with group contracts. The vast majority of firms who sell to individuals do so through affinity groups. These are groups whose special interests, sometimes related to a particular disease, are represented by an organization. Customers who are members of an affinity group are classified as being individual customers, since the relationship is that of a referral and the pharmacies collect payment from the individual customer. It is, however, important to note that the mail service firms did not market directly to individual members of affinity groups. Only 1 firm interviewed marketed directly to individual customers. A couple of firms were considering test marketing direct sales in a limited geographic area.

Individuals over 65 represented a large portion of sales in mail service pharmacies, despite the predominance of employer contracts. Both employer and union contracts tend to include retirees as eligible for prescription drug coverage. While the proportion of customers over 65 years old is generally less than 50 percent (mean = 38 percent; range 15-79 percent), the proportion of sales to individuals over 65 years old is generally over 50 percent (mean = 56 percent; range 25-90 percent). This reflects the fact that individuals over 65 years old are heavier users of prescription drugs, especially chronic medications, than individuals under 65 years old.

C. Other Characteristics

Although three firms indicated they have been in the mail service business for 20 years, more than half of the firms have been in the business for 5 years or less. Three firms have entered the business during the past year. As expected, the average age of small firms (those dispensing less than a million prescriptions annually) is lower (7 years) than the average age of larger firms (13.5 years).

In general, mail service firms market on a national basis. Twenty-six firms consider their market to be national, with an additional six firms considering their market to be regional. All of the large firms consider their market to be national. All firms had toll-free lines to accommodate inquiries from their long-distance customers.

Most firms indicated that they have only one distribution site. Four firms have more than one site. Several single and multiple site firms indicated they were in the process of establishing additional sites. During the course of our study, at least three single site firms moved to new, enlarged facilities.

All of the large firms use automatic dispensing equipment. Twenty-three of the small firms also use this equipment. All but one pharmacy maintains patient profiles. More than half of the firms indicated that they carry other product lines such as vitamins and minerals, over-the-counter medications, durable medical equipment and disposable medical supplies. Four firms indicated they also process prescription drug benefit claims.

In summary, we conclude from our preliminary inquiry that the mail service pharmacy industry represents a rapidly expanding and changing delivery system. Important characteristics of the industry include:

- a high degree of concentration among a few firms;
- a rapidly expanding growth in sales and distribution facilities;
- a large number of firms under 5 years old;
- a majority of customers from group contracts with employers and insurers/third-party administrators; and
- minimal marketing directly to individual customers.

CHAPTER V

FINDINGS FROM THE SURVEY OF MAIL SERVICE PHARMACIES

A. Operational and Administrative Characteristics

This description of mail service pharmacies is based upon a mail survey, and subsequent on-site visit, of nine firms. The findings are summarized in tables which present quantitative data derived from responses to the mail survey. Additional descriptive information was obtained during on-site visits and is included as appropriate in this section. Although we were not able to survey the entire universe of identified mail service pharmacies, we feel that, since many features of the operations were common to all of the sites surveyed, we are able to draw reasonable conclusions as to the nature of operations in most mail service pharmacies. The primary differences among the sites were associated with scale of operations. To portray the impact of scale of operations, we have broken the descriptive details into two size categories: large firms dispensing more than one million prescriptions annually, and small firms dispensing less than one million prescriptions annually. While the small sample size precludes any conclusions as to the statistical significance of any differences, the breakdown is useful when considering how firms probably will develop if the predicted growth for the industry is correct.

Size of Operations (Table 1)

As discussed, we divided our sample into two categories based upon the number of prescriptions dispensed. As expected, other size variables such as sales revenue, number of contracts and number of orders filled are consistent with this breakdown. Mail service pharmacies are an emerging industry characterized by rapid growth. When asked about growth in sales between 1987 and 1988, all mail service pharmacies reported substantial growth with percentage increases ranging from 16 percent to 82 percent. The weighted average growth in sales was 52 percent. In general, the smaller firms are younger and experienced more rapid growth than their larger counterparts.

Customers (Table 2)

Consistent with the findings of the telephone inquiry, the majority of customers come to mail service pharmacies as a result of funded group contracts. All firms indicated that they also have customers who come to them through unfunded

TABLE 1
SIZE OF OPERATION
CY88

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
	mean / (standard deviation)		
No. of Rx Filled	231,018 (163,971)	5,460,952 (5,285,481)	3,136,537 (4,645,006)
Sales Revenue	$13,163,308 (14,952,260)	$204,928,655 (206,159,059)	$119,144,056 (177,787,056)
No. of Contracts	41.5 (21.3)	310 (240)	182 (205)
No. of Orders Filled	103,088 (72,830)	2,877,381 (2,906,355)	1,641,512 (2,514,876)
No. of Rx per Order	2.30 (.28)	2.12 (.39)	2.20 (.32)
% Growth in Sales* CY87 to CY88	178%	46%	52%
Years in Business	5.3 (4.0)	15.2 (10.7)	10.8 (9.5)

*Weighted averages based upon dollar sales.

TABLE 2
CUSTOMERS

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
		mean / (standard deviation)	
No. of Eligibles	397,895 (388,407)	9,075,856 (11,869,426)	5,218,985 (9,561,214)
No. of Eligibles Using Service*	20,048 (13,849)	985,840 (716,989)	571,929 (723,603)
% of Eligibles Using Service*	9.6 (3.0)	13.8 (6.4)	12.0 (5.3)
% of Rxs > 65 Years Old	57.8 (9.2)	47.2 (18.7)	51.9 (15.5)
		No. of firms	
Individual Customers	3 (75%)	3 (60%)	6 (67%)
Affinity Groups	4 (100%)	5 (100%)	9 (100%)

* item non-response (small firms N=3; large firms N=4)

affinity groups. In addition, six firms have individual customers who are not members of any group. In general, these represent walk-in customers whom mail service pharmacies must serve to comply with State requirements. The location of the facilities is generally such that walk-ins are rare. Only two firms market directly to individual customers.

The penetration of mail service pharmacies among those eligible to use their service is relatively low, approximately 12 percent. In general, the penetration increases as a contract matures and the eligibles become more familiar with the option. This is reflected in the higher penetration among larger, more established firms.

Finally, sales to individuals over 65 years old represent over 50 percent of the prescriptions dispensed in mail service pharmacies. This suggests that the ability to comply with the provisions of the MCCA and to satisfy their existing elderly customers is very important to the viability and future expansion of mail service pharmacies.

Types of Contracts (Table 3)

As discussed previously, the majority of customers come to mail service pharmacies as a result of a contract negotiated directly with their employer or insurer. The vast majority of these contracts provide for optional consumer participation. In some instances, cost sharing is waived if the mail service option is chosen. Cost sharing generally takes the form of a flat copayment per prescription. Clearly, a flat copayment is easier to administer when the copayment must be sent with an order but several firms also have a few contracts with percentage copayment provisions. Few have contracts that provide for an annual deductible consistent with the provisions of the MCCA.

Most firms have some contracts with a differential copayment for a brand-filled and a generic-filled prescription. The practice appears to be more prevalent among small firms who may not be able to achieve the same production efficiencies as large firms and may promote cost containment through increased generic substitution.

Most contracts with mail service pharmacies provide for dispensing a 90-day maximum supply. In order to promote the dispensing of larger supplies, several firms have contracts with groups who provide their members with a list of drugs suggested to be filled for a 90 day supply.

TABLE 3
TYPES OF CONTRACTS

	Small Firms (N=4)	Large Firms (N=5)	All Firms N=9)
	Percent of Eligibles		
	mean / (standard deviation)		
Optional Consumer Participation in Mail Service Benefit (N=8)	94.8 (4.1)	99.1 (1.0)	96.6 (3.8)
Cost Sharing through Copayments (N=7)	95.1 (6.7)	99.3 (.7)	96.9 (5.3)
Different Cost Sharing for Brand/Generic Product (N=8)	45.0 (38.3)	15.6 (17.5)	30.3 (31.7)
Maximum Days Supplied: (N=8)			
<90 days	4.5 (4.7)	2.6 (3.2)	3.5 (3.8)
90 days	88.0 (12.5)	92.5 (7.9)	90.2 (10.0)
>90 days	7.6 (15.0)	5.1 (5.3)	6.3 (10.5)
Reimbursement Formulas: (N=5)			
AWP + fee			5.3 (8.5)
AWP - discount			18.6 (16.4)
AWP - discount + fee			72.1 (28.7)

Controlled substances are generally filled for 30-day maximum supply in accordance with applicable Federal and State laws. Contracts for longer than a 90-day supply are very rare. If a prescription is received for a supply in excess of the maximum allowable supply, the prescription is generally cut back to the maximum amount and the customer is notified.

Contracts also include a negotiated payment formula that differs among clients. The majority of customers are covered by contracts which specify the reimbursement formula to be AWP less a percentage discount plus a dispensing fee. The discount from AWP is generally larger for generic products than for brand products. More recently, a small percentage of mail service pharmacies have been promoting a different reimbursement formula: AWP less a percentage discount. This suggests that actual drug acquisition cost for some mail service pharmacies is below AWP.

Dispensing Procedures (Table 4)

The production facilities of mail service pharmacies concentrate on processing new and refill prescriptions for maintenance drugs. This permits the implementation of highly efficient production-line techniques for dispensing most prescriptions. While the precise physical layout of each site varied considerably, the following represents an outline of the common elements of the workflow observed at all sites.

All firms use support personnel to open and sort mail into new prescriptions, refill orders and prescriptions requiring special handling. Most firms used support personnel to enter family and plan information into the computer system for eligibility determination, to handle checks and credit card approvals related to copayments and to classify orders for further processing.

Pharmacists are usually employed to enter or review new prescription information in a database that maintains patient information and drug histories, usually including allergies and sometimes including major disease conditions such as arthritis, diabetes or heart disease. Nonpharmacist personnel generally enter refill orders. Typically, the computer system includes software to alert the pharmacist to potential drug-drug interactions, drug overdoses, duplicate prescriptions, early refills, and

TABLE 4
DISPENSING PROCEDURES

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
	mean / (standard deviation)		
% of Rx Dispensed Using Automated Equipment	40.8% (31.2)	81.4% (16.3)	63.3% (31.0)
% of Orders Sent US Mail	47.0% (22.0)	52.7% (36.1)	50.2% (29.0)
% of Orders Sent UPS	52.3% (20.6)	46.2% (35.5)	48.9% (28.3)
Average Shipping Costs	$ 1.61 (.59)	$ 1.78 (.44)	$ 1.71 (.49)
Average Turnaround Time in Hours	20.8 (12.1)	43.2 (10.7)	33.2 (15.9)
Ratio of Pharmacist/ NonPharmacists	.474 (.211)	.751 (.280)	.628 (.278)
Ratio of Full-Time/ Part-Time	17.50 (22.98)	8.83 (4.97)	12.68 (15.21)

generic availability. Some systems also incorporate coverage restrictions for certain patients as determined by contract provisions. A more complete description of the computer applications follows in the next section.

Prescriptions screened out during the process for failing drug use review criteria or with other problems are usually referred to customer service. Callbacks are made as necessary to either the prescriber or patient. All physician contacting is performed by registered pharmacists. If a problem cannot be resolved or a prescription cannot be filled, the prescription is returned to the patient with a letter explaining why it cannot be filled.

Prescriptions may be physically filled by pharmacists or technical personnel. Depending upon prescription volume, drug products may be prepackaged; counted by automatic tablet counters using Baker cells, canisters, or hand feeding; or manually dispensed. The extent of use of automated tablet counters is related to the size and volume of the operation. Smaller mail service pharmacies seem to make greater use of technicians in the measurement function, larger firms, automated equipment. The smaller pharmacies in our sample dispensed only about 40 percent of their prescriptions using automated equipment whereas the larger firms dispensed about 80 percent of their prescriptions using such equipment. Orders for controlled substances, compounded prescriptions, or other special cases usually are dispensed separately from other prescriptions and handled as appropriate to the situation. Controlled substances are kept in secured areas.

Labels are generated by computer, auxiliary labels attached, and the finished prescription doublechecked by another pharmacist. Sometimes patient package inserts are included, although this was highly variable. One firm had over 100 leaflets covering a majority of drugs dispensed; another only provided inserts as required by law. Most provided leaflets with some drugs. If applicable, refill order forms with an earliest reorder date are included with the finished order.

Most firms employ registered pharmacists to perform quality review of filled prescriptions. This review includes checking that: the prescription entry department has translated the physician's prescription accurately; the proper medication has been dispensed; the proper quantity of medication has been dispensed; the appropriate patient

advisory leaflets have been inserted and the proper reorder materials are included.

Finished orders are packaged so their contents are not identified on the mailing label and shipped via U.S. mail or United Parcel Service (UPS). Mode of delivery is generally whichever costs less or is specified as the customer's preference. Emergency orders are shipped for overnight delivery. Controlled substances are invariably shipped UPS with the recipient signature required.

Most mail service pharmacies had extensive security systems in place to prevent drug diversion. Examples of security measures include: entry and exit searches of bags, hidden cameras which are rotated, and locked areas for controlled substances. In summary, because of the scale of operations, mail service pharmacies are able to assign appropriate tasks to nonpharmacist personnel, thereby utilizing their pharmacist personnel more efficiently. In the sites visited, both the division of labor and the supervision of the nonpharmacist personnel was appropriate. None of the pharmacies visited made excessive use of part-time personnel or had any production bonuses. While a few mail service pharmacists told us that they missed the face-to-face customer contact of the community pharmacy setting, they felt that better working conditions, including regular work hours and the opportunity to concentrate on prescription products, improved the quality of the service they delivered. A more detailed look at the implications of the dispensing process on the quality of pharmaceutical services is contained in Chapter VI.

Computer Applications (Table 5)

Mail service pharmacies utilize a network approach to computers. Individuals have access to a common database from multiple entry points including, but not limited to, customer relations, accounting and billing, administration, prescription screening and dispensing areas. Dispensing devices such as Baker cells generally did not interface with computers since multiple stations using the same dispensing devices present logistical problems.

Most computer applications were the same as those mentioned in the literature for community pharmacies: maintenance of patient profiles, price updates, screening for allergies, drug interactions, dosage and premature refills and printing mailing, prescription and patient instruction labels.

TABLE 5
COMPUTER APPLICATIONS

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
		No. of firms	
Functions performed:			
Print Rx label	4 (100%)	5 (100%)	9 (100%)
Print auxiliary warnings	1 (25%)	3 (60%)	4 (44%)
Print patient info. sheets	2 (50%)	1 (20%)	3 (33%)
Print mailing labels	4 (100%)	5 (100%)	9 (100%)
Prepare filling lists	3 (75%)	3 (60%)	6 (67%)
Patient medication profiles	4 (100%)	4 (80%)	8 (89%)
Control dispensing cells	0 (0%)	1 (20%)	1 (11%)
Formulary control	3 (75%)	4 (80%)	7 (78%)
Eligibility screening	4 (100%)	4 (80%)	8 (89%)
Credit card validation	0 (0%)	2 (40%)	2 (22%)
On-line claims adjudication	0 (0%)	2 (40%)	2 (22%)
Prescriber registry	4 (100%)	5 (100%)	9 (100%)
Product price updates	4 (100%)	5 (100%)	9 (100%)
Auto. inventory order list	2 (50%)	4 (80%)	6 (67%)
Electronic inventory ordering	1 (25%)	3 (60%)	4 (44%)
Screen for allergies	4 (100%)	4 (80%)	8 (80%)
Screen for drug interactions	4 (100%)	5 (100%)	9 (100%)
Screen for dosage	3 (75%)	3 (60%)	6 (67%)
Screen for premature refills	4 (100%)	5 (100%)	9 (100%)
Screen for late refills	3 (75%)	2 (40%)	5 (56%)
Screen for dup. therapy	3 (75%)	3 (60%)	6 (67%)
Drug utilization review	3 (75%)	2 (40%)	5 (56%)

Most systems did not support the electronic transfer of data. Only two sites used their computers for on-line point-of-sale claims adjudication and credit card validation. Four sites used their computers for electronic inventory ordering. While most sites used their computer for eligibility screening, only a few sites conducted such screening interactively with access to remote data bases. Most sites depended upon magnetic tape or hard-copy updates to the eligibility files to perform screening.

In summary, the computer systems of mail service pharmacies performed all the functions routinely performed by computers in community pharmacies. Because of the scale of their operations, mail service pharmacies can support extensive equipment providing flexibility in their processing, capacity for large files and back-up equipment for disaster recovery.

Types of Prescriptions Filled (Table 6)

Most firms dispense all prescriptions received, although acute medications are rare. Mail service pharmacies frequently offer to integrate their plans with arrangements for customers to obtain acute medications through a card system or through a network of community pharmacies.

Mail service pharmacies promote the use of generic substitution as a major source of cost containment. Most firms visited include generic substitution prompts in their computer programming to guide the pharmacist as to the availability of a generic if a brand were prescribed and substitution were legally permissible. The overall generic substitution rate is 25 percent. The rate is highly variable, ranging from 7 percent to 40 percent, depending upon the applicable State substitution laws. Several firms indicated they had chosen the location of their facilities to take advantage of liberal substitution laws.

Range of Products (Table 7)

Over 90 percent of all prescriptions dispensed by mail service pharmacies are for solid oral dosage forms. All but one small firm are willing to dispense compounded and liquid preparations. All but two are willing to dispense refrigerated items and provide the appropriate packaging for shipment. Most firms are willing to take the extra precautions necessary to dispense controlled substances. If a firm does not have a particular medication available

TABLE 6
TYPES OF PRESCRIPTIONS FILLED

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
	mean / (standard deviation)		
% New Rxs	49.0% (8.4)	47.2% (7.7)	48.0% (7.5)
% Controlled Substances	12.5% (4.0)	11.2% (5.6)	11.8% (4.7)
% Generic Products	23.8% (11.4)	26.6% (8.8)	25.3% (9.5)
Average Days Supply	70.8 (3.7)	81.4 (11.5)	76.7 (10.1)

TABLE 7
RANGE OF PRODUCTS

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
		No. of firms	
Refrigerated Items	2 (50%)	5 (100%)	7 (78%)
Liquids	3 (75%)	5 (100%)	8 (89%)
Schedule II	2 (50%)	5 (100%)	7 (78%)
Other Controlled Substances	4 (100%)	5 (100%)	9 (100%)

to dispense, it will generally arrange for same or next day delivery from a distributor. Most firms offer nonprescription drugs, vitamin and mineral products and food supplements through catalog sales.

Patient Counseling (Table 8)

All mail service pharmacies maintain 800-lines for use by patients and providers. Hours of operation varied from daytime only to 24-hour service. Most pharmacies with limited hours have an answering service that can refer emergency calls to a pharmacist. Phones are typically manned by nonpharmacist customer service representatives who can refer drug-related questions to pharmacists. Pharmacists have the opportunity to follow up on patient questions by calls to the patient's physician. The overwhelming majority of questions are not drug related. Many calls are for refill orders which most firms will accept over the phone.

Most firms include patient information leaflets with new prescription orders. The number of drugs for which leaflets are available varies greatly. Among the firms not providing leaflets, the rationale is that the leaflets raise more questions than they answer. All firms indicated that they would include patient information leaflets if required for participation in the Medicare program.

B. Cost and Efficiency Issues

To assess the potential administrative cost differences and other economies of mail service pharmacies, our mail survey was designed to collect information on prescription costs, sales and operating expenses, and cost and operating efficiencies of mail service pharmacies. A separate study to determine the overhead costs and discounts given to third-party insurers by retail pharmacies is delegated to the General Accounting Office (GAO) by section 202(k)(2) of the MCCA.

Prescription Prices (Table 9)

The mail service pharmacies participating in this survey reported an average prescription price of $42.32. Large and small mail service pharmacies had similar average prescription prices. There was a considerable variance, however, among the nine pharmacies, with one firm averaging as high as $54.17 per prescription. Each time a mail

TABLE 8
PATIENT COUNSELING

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)
		No. of firms	
Routinely distributing patient information leaflets	1 (25%)	5 (100%)	6 (67%)
Accepting refill orders over the phone	3 (75%)	3 (60%)	6 (67%)
Having separate phone line for MD calls	1 (25%)	3 (60%)	4 (44%)
Requiring annual updates of Rx (N=8)	4 (100%)	3 (75%)	4 (88%)
		mean / (standard deviation)	
No. of patient calls/ 1,000 Rx dispensed (N=9)	282.5 (125.4)	175.2 (123.3)	222.9 (129.2)
No. of MD calls/ 1,000 Rx dispensed (N=8)	15.8 (13.6)	2.7 (1.5)	9.2 (11.4)
% Customers returning profiles (N=9)	87.3 (10.5)	71.0 (42.2)	78.2 (31.7)

TABLE 9
PRESCRIPTION PRICES

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)	Range
	mean / (standard deviation)			
Average prescription selling price	$ 41.78 (7.40)	$ 42.75 (11.93)	$ 42.32 (9.59)	$ 23.21-54.17
Average no. of prescriptions per order	2.30 (.28)	2.12 (.39)	2.20 (.32)	1.5-2.7
Average price per order	$ 97.49 (28.77)	$ 94.11 (37.38)	$ 95.61 (31.81)	$ 34.82-135.00
Average day supply per prescription	70.8 (3.7)	81.4 (12.8)	76.7 (10.1)	66.3-98.1
Average price per days supply	$ .587 (.075)	$ .540 (.171)	$ .561 (.132)	$ .237-.667
Gross margin per prescription*	$ 7.81 (3.36)	$ 8.85 (2.57)	$ 8.46 (2.70)	$ 3.94-10.83

*Item non-response (small firms N=3; large firms N=5)

service patron orders a prescription, the request typically averages 2.2 prescriptions per order. Again, the average number of prescriptions per order does not vary substantially with respect to large versus small firms. Individual firms ranged from a low of 1.5 prescriptions per order to a high of 2.7 prescriptions per order. The resulting total charge per order averaged $95.61, with individual firms averaging as little as $34.82 per order and as much as $135.00 per order.

The average prescription is for 76.7 days supply of medication and the average charge per days supply of medication is $.561. The range in charge per days supply of medication among the nine firms surveyed is quite wide, with a low of $.237 per days supply to a high of $.667 per days supply. The lowest average charge per days supply ($.237) was less than one half the next lowest average charge per days supply of $.495. Comparing average costs among mail service pharmacies is, however, subject to severe limitations and should be interpreted cautiously. Two of the most important factors in prescription costs are the generic fill rate and the mix of medications dispensed. Neither of these factors is entirely under the control of the mail service pharmacy. Generic fill rates are dependent upon the substitution laws of the State in which the pharmacy is located and the mix of medications may be influenced by the composition of client groups, especially affinity groups associated with particular diseases (i.e., Arthritis Foundation).

Prescription charges include two principle components: the drug product cost and the cost of dispensing. The drug product costs average 80 percent of the total prescription charge for mail service pharmacies. The remaining 20 percent of the prescription charge is the pharmacy's gross margin which is an approximation of the average cost of dispensing a prescription or the administrative fee. By multiplying the average prescription price by the percent gross margin, an average gross margin per prescription dispensed can be calculated. Mail service pharmacies average a gross margin of $8.46 per prescription with a range from $3.94 to $10.83 per prescription.

This gross margin cannot be compared directly to the $4.50 administrative fee to be paid under the MCCA. Under the MCCA, payment for a multiple source drug product without a restrictive prescription is based on the lesser of the actual charge for the drug product or the sum of the number of dosage units dispensed times the unit average price,

plus an administrative allowance, where the unit average price represents the unweighted median of the different distributors' AWP or comparable direct price for the same multisource drug product. Such a payment formula does not reflect the net acquisition cost of a mail service pharmacy, based on the fact that most mail service pharmacy contracts with beneficiary groups allow a substantial discount from AWP, plus an administrative fee to cover their dispensing costs and a reasonable profit. In order to determine an appropriate dispensing fee under MCCA for mail service pharmacies, more information is needed on net acquisition costs.

The prescription price data reported by mail service pharmacies in this survey can be compared to prescription price data for retail community pharmacies. These comparisons must also be viewed with caution because of the differences in types of medications dispensed and in days supply of medication per prescription. Prescription charges in community pharmacies averaged $15.19 per prescription dispensed in 1988 (American Druggist, 1989). Community pharmacy prescriptions averaged nearly a 26-day supply of medication per prescription. The resulting average charge per days supply is $.58 which is essentially the same as the $.56 per days supply for the mail service pharmacies. Although prescription mix differences make direct comparisons inconclusive, this result does not appear to substantiate the mail service pharmacy claim that they could deliver maintenance drugs at substantially lower cost than community pharmacies.

Operating Expenses (Table 10)

Large and small pharmacies responding to this survey clearly represent operations of a very different order of magnitude. The small mail service firms filled an average of 231,081 prescriptions during calendar year 1988, while the large firms filled an average of 5,460,952 prescriptions during the same time period. Gross sales revenue averaged $13 million versus $205 million for the small and large firms, respectively. Despite the order of magnitude difference in number of prescriptions and in sales revenue, small and large mail service pharmacies have similar gross margins, 18.8 percent and 20.7 percent, respectively. In fact, the slightly higher percentage gross margin of large firms versus small firms is counter-intuitive. In a competitive market, one would normally expect that the economies of scale inherent in larger firms would be reflected in lower gross margins.

TABLE 10

OPERATING EXPENSES

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)	Range
	mean / (standard deviation)			
No. of Rx filled	231,018 (163,971)	5,460,952 (5,285,481)	3,136,537 (4,645,006)	--
Sales Revenue* **	$ 5,884,411 (4,178,643)	$ 204,928,655 (206,159,059)	$ 130,287,064 (186,825,376)	--
Cost of goods sold* (Includes expenses as listed below)	$ 4,552,998 (2,906,940)	$ 161,101,350 (155,236,557)	$ 102,395,718 (142,609,258)	--
Gross margin* (Revenue - Cost of goods) / Revenue	18.80% (6.70)	20.72% (2.19)	20.00% (4.01)	12.00-25.40%
Expenses as a percent of sales revenue***				
Employee Compensation			9.24%	9.00-9.60%
Rent/interest			.99%	.20-1.50%
Capital equipment			.97%	.50-1.50%
Telephone			.44%	.30-.60%
Bad debt			.27%	.00-.75%
Shipping and handling			1.97%	1.30-4.30%
Other expenses			4.76%	1.05-8.87%

*Item nonresponse (small firms N=3; large firms N=5)

**Only 8 firms supplied cost of goods sold. Therefore, sales revenue is calculated only for these 8 firms, for comparison with the cost of goods sold and gross margin percent. Sales revenue for all 9 firms was given in Table 1.

***Item nonresponse (small firms N=3; large firms N=2)

Detailed information on operating expenses was requested in this survey (see Appendix B). This information would have allowed an assessment of the reasons for a higher gross margin percentage among large firms. As discussed earlier, several of the participating firms refused to provide the financial information requested. Five of the nine firms surveyed did provide some information on operating expenses. When these operating expenses, expressed as a percentage of sales revenue, are compared with similar expense categories for community pharmacies, a few differences are noted.

Total employee compensation for mail service pharmacy firms averages 9.2 percent of gross sales. Chain pharmacies typically spent 10.1 percent of gross sales on employee expense while independent community pharmacies spent about 15.1 percent of gross sales on employee expenses (NACDS-Lilly Digest, 1986) (Lilly Digest, 1988). This suggests that the larger scale operations of mail service and chain pharmacies are able either to utilize their labor more efficiently or to substitute nonlabor factors. Rent or interest expense for facilities to house mail service operations averaged 1.0 percent versus 2.6 percent and 2.4 percent, respectively, for chain and independent community pharmacies. This suggests that mail service pharmacies are able to save facilities costs by locating in less costly, nonretail locations. One expense category is substantially higher for mail service firms than for community pharmacies. Shipping and handling costs represented an average of 1.97 percent of gross sales for the mail service firms participating in this survey. In contrast, community pharmacies experienced virtually no expense for shipping and handling.

Cost and Operating Efficiencies (Table 11)

Several factors may provide mail service pharmacy firms operating efficiencies or costs that are less than community pharmacies. These factors include inventory costs and turnover rates, automated dispensing, generic fill rates and prescription size.

Mail service pharmacy firms responding to the survey had an average inventory turnover rate of 13.7 turns per year. Community pharmacies, in contrast, average 4.9 turns of their inventory per year (Lilly Digest, 1988). This indicates that community pharmacies have a larger portion

TABLE 11

OPERATING EFFICIENCY

	Small Firms (N=4)	Large Firms (N=5)	All Firms (N=9)	Range
	mean / (standard deviation)			
Average inventory*	$ 325,908 (206,635)	$ 24,757,454 (38,168,762)	$ 15,595,624 (31,502,134)	--
Inventory turnover rate (turns per year)	17.3 (7.7)	10.9 (4.8)	13.7 (6.7)	4.6-26.0
Inventory/sales*	.065 (.033)	.088 (.045)	.080 (.040)	.038-.165
% of Rx dispensed using automated equipment	40.8% (31.2)	81.4% (16.3)	63.3% (31.0)	0-100.0%
% generic products	23.8% (11.4)	26.6% (8.8)	25.3% (9.5)	7.0-41.0%

*Item nonresponse (small firms N=3; large firms N=5)

of their assets tied up in inventory to sustain the broader range of medications required in the community setting. Also, because of high volume sales and a frequent or constant reorder cycle, mail order pharmacies may be better situated to operate with a minimal, "just in time" inventory system. It is interesting that small mail service pharmacy firms appear to have outperformed large firms with an inventory turnover of 17.3 versus 10.9 turns per year, respectively. This suggests that larger firms may find the benefit of taking advantage of volume discounts offered by manufacturers and distributors exceeds the cost of carrying a larger inventory.

Another indicator of the impact of differing inventory efficiencies between mail service firms and community pharmacies is the dollars in inventory per dollar of sales. Mail service pharmacies averaged $.080 in inventory for each dollar of sales. Small mail service pharmacies had only $.065 inventory per dollar of sales versus $.088 inventory per dollar of sales for large mail service pharmacies. Community pharmacies, on the other hand, averaged $.104 in inventory per dollar of sales (Lilly Digest, 1988). These findings suggest that community pharmacies experience higher inventory carrying costs than do mail service pharmacy firms, which is consistent with evidence discussed on inventory turnover rates.

Mail service firms have developed automated systems for filling and checking prescriptions. As discussed in a previous section on dispensing procedures, these systems substitute automated and computerized equipment for the pharmacist to accomplish the mechanical tasks of dispensing a prescription. Pharmacists are still utilized for many of the cognitive aspects of filling and dispensing a prescription. Mail service firms reported use of automated dispensing procedures for 63.3 percent of the prescriptions filled. Noteworthy, however, is the fact that one of the pharmacies reported no automated dispensing and another reported 100 percent automated dispensing. Large mail service pharmacies have adopted this technology much more extensively than small firms with reported automated dispensing rates of 81.4 percent versus 40.8 percent.

The difference in generic fill rates among mail service pharmacies appears to be due to two factors. First, the pharmacy laws and regulations of the State in which the mail service pharmacy is located may be more or less restrictive. The mail service pharmacy reporting the lowest generic fill rate is located in a State with a more restrictive drug product selection law. Other mail service

pharmacies surveyed had also considered having a pharmacy in the same State but had decided not to do so specifically because of the substitution laws. The second major influence is the benefit design of the drug program. A higher generic fill rate was found among mail service firms that had a large number of contracts covering only the cost of a generic product or requiring that generics be used by patients unless prohibited specifically by the physician. Such benefit design policies requiring generic use do have a major influence on the generic fill rate.

At present, mail service firms appear to have a higher generic fill rate of 25.3 percent, compared to 13.1 percent for new prescriptions at community pharmacies (American Druggist, 1989). This difference in generic fill rates could result in savings to the Medicare program. However, the difference may be just an artifact created by the tendency of mail service pharmacies to locate in States with liberal drug product selection laws. Also, the MCCA outpatient drug program is expected to increase the rate of generic dispensing in community pharmacies by specifying that the payment rate for multiple source products will be subject to an upper limit unless the physician notes in his or her own handwriting "brand medically necessary." This payment policy provides strong motivation for both mail and community pharmacies to dispense generic drugs whenever possible, which should minimize differences in their rate of generic substitution except as mandated by State law. This factor may deserve monitoring to assure that community pharmacies regularly dispense generic products unless brand medically necessary is specified, to insure that the potential savings through increased generic substitution is realized.

Earlier it was noted that the average days supply per prescription for mail service pharmacies was about 76.7 days of medication per prescription. This average days supply is considerably above the average of 26 days supply for community pharmacies. This difference in days supply is the result of mail service and community pharmacies filling a different mix and type of prescription. Mail service pharmacies typically fill chronic medications with a 90-day supply. Community pharmacies fill many prescriptions for a 90-day supply, but they also fill many acute-care, short-term prescriptions such as antibiotics, pain relievers, and cough and cold remedies. Cost efficiencies can be achieved in a drug program when chronic medications are dispensed as one 90-day prescription rather than as three 30-day prescriptions. This approach can result in eliminating two

dispensing fees, but the economic advantages must be balanced against other concerns such as patient compliance, overdose or drug wastage and hoarding. The MCCA does have a provision authorizing a select list of drugs to be dispensed in 90 day quantities. This provision could affect both mail service and community pharmacies equally.

Conclusion

Many of the detailed cost analyses originally planned for this study could not be performed because of a lack of data. If mail service pharmacies do experience any economic efficiencies from their operations or inventory control policies, the data collected on average prescription selling price does not allow us to draw any conclusions as to whether the savings associated with these efficiencies are passed on to their customers. In order to assess any potential cost savings to the Medicare program, it would require more detailed acquisition cost and financial information than the mail service pharmacies were willing to disclose in this study.

CHAPTER VI

QUALITY, LEGAL, AND OTHER ISSUES UNDER THE MCCA

A. Quality Issues

Assessment of quality issues was made primarily through observations during the operational tour of mail service pharmacies at the time of the site visit. These observations were supplemented by certain elements in the mail questionnaire and discussion during the interview at the time of the site visit.

Drug Product Quality

The quality of drug products in the United States is very good. The pharmaceutical manufacturing industry is closely regulated by the Food and Drug Administration (FDA) and products are thoroughly tested for safety and efficacy before approval for marketing. The process of manufacturing is controlled by "Good Manufacturing Practice" regulations which are enforced by inspectors of the FDA.

The sources of supply for single-source (patented) drugs are the same for mail service pharmacies and other types of pharmacy providers. The only possible area of variation is in the choice of suppliers for multiple-source (generic) drugs. The mail service firms visited appeared to use generic distributors, such as Rugby, and Moore and Schein, that are also widely used by other types of pharmacies.

Most of the mail service firms had policies in place related to rotation of drug stocks and for assuring that prescriptions were dispensed in such a way that patients would not be taking drugs beyond the manufacturer's stated expiration date. Examples of policies include not accepting delivery of inventory within 2 years of its expiration date and returning to the distributor or manufacturer all inventory within 6 months of its expiration date. Inspections of inventory during the site visits revealed only occasional instances of products on the shelf with expiration dates violating company policies. The inspections did not reveal any instances of outdated products based upon manufacturer's expiration date.

We conclude that the quality of drug products dispensed by mail service firms is very good since mail service pharmacies used major manufacturers and distributors as their source of drugs.

Quality of Pharmacy Services

We evaluated the quality of pharmacy services offered by mail service pharmacies through responses to the mail questionnaires and through data obtained at the site visits. Since the quality of professional services is difficult to assess quantitatively, we relied on qualitative judgments using the Standards of Practice for the practice of pharmacy prepared by the American Association of Colleges of Pharmacy as the basis for comparison. The standards of practice cover four major areas: general management and administration of the pharmacy, activities related to processing the prescription, patient care functions, and education of health care professionals and patients. Of these, the second area seems most relevant to the outpatient drug program. This section of the standards identifies 19 responsibilities. Mail service pharmacies appear to fulfill each of these responsibilities.

At all sites, the division of labor between pharmacist and nonpharmacist personnel appeared appropriate. Registered pharmacists verified the prescription order for: completeness and legality; for amount per dose, appropriate route, frequency and duration of therapy; and physical and chemical compatibility. In addition, pharmacists were responsible for checking patient information before dispensing prescribed medications and for selection of the source of supply of drug products.

Well over 90 percent of the prescriptions dispensed by mail service pharmacies are for solid oral dosage forms. Measurement requires counting tablets or capsules. For rapidly moving products, such measurement is handled through prepackaging of unit-of-use quantities, automated tablet counters such as Baker Cells, cassette-loaded tablet counters, or manually-loaded counters. Less frequently dispensed products are manually counted by pharmacists or technicians. In all firms visited, appropriate controls and supervision by pharmacists of this function were present.

Mail service pharmacies provide a wide range of services and dispense a full line of prescription drug products. All mail service pharmacies had an initial sorting step that permitted separating prescriptions for acute or emergency use. Although none of the mail service pharmacies encouraged patients to send prescriptions for acute care, most dispensed such prescriptions, often with an advisory to have them dispensed locally in the future.

All of the large firms and all but one of the small firms reported a willingness to dispense compounded prescriptions. The elaborateness of the compounding area was a factor of volume. Because compounded prescriptions make up less than 1 percent of all prescriptions, incoming prescriptions requiring compounding are accumulated and dispensed periodically, usually by a pharmacist specializing in this function. Although we did not witness the compounding process, it is likely that the greater opportunity to compound (due to volume) and the capability for specialization in compounding would result in quality at least as good as that in community pharmacy.

All of the large mail service pharmacies and all but one of the smaller firms reported a willingness to dispense liquid prescriptions. Because reconstituted pharmaceuticals usually are prescribed for acute conditions, mail service pharmacies would encounter such prescriptions rarely. Although we have no direct evidence, we have no reason to believe that they could not handle such prescriptions appropriately.

Mail service pharmacies make extensive use of computer systems to assist in and assure the integrity of the dispensing process. Eight of the nine sites surveyed maintain computer-based patient medication profiles. Among the eight firms maintaining patient profiles, data such as patient allergies, medical conditions, and age were reported to be on file for 88 percent of the patients. Many customer contracts require that these profiles be maintained. While comparative data are unavailable for community pharmacy, it is unlikely that it is as high. All mail service pharmacies maintain prescription files in accord with relevant laws and regulations of the State in which they are located.

All firms visited used computer systems to generate patient labels. Most computer systems offered prompts to the pharmacist about appropriate auxiliary labels; four systems generated them. Three computer systems generated patient information sheets. The large mail service pharmacies included patient information leaflets with a large proportion of their prescriptions. These leaflets were usually obtained from external sources such as United States Pharmacopoeia or the American Medical Association. At least two mail service pharmacies in our sample only provided written patient information when required by the FDA (e.g., for estrogen products).

Mail service promotes the use of generic substitution as a major source of cost saving. Seven of the nine firms visited included generic substitution prompts in their computer programming to guide the dispensing pharmacist to the availability of a generic if a brand were prescribed and substitution were permissible legally. The computerized systems attempt to deal with situations in which bioequivalence may be an issue. FDA's "Orange Book" is often used as the basis for the underlying computer software. There is no evidence to indicate that mail service pharmacy deals with the bioequivalence issue any differently than large chains or other types of pharmacy providers.

All mail service pharmacies visited had a final check of the finished prescription by a pharmacist to verify the accuracy of all steps. In the larger firms, this was a different pharmacist from the pharmacist performing the other dispensing tasks. Some firms had pharmacist involvement at three or more points in the dispensing process, and rotated pharmacists among functions to prevent monotony and lack of vigilance.

Several of the firms had elaborate error-checking procedures to track the responsibility for errors to specific personnel. Since mail service pharmacy is a young industry, historical data are not available related to error rates as compared to other outlets. In reality, no consensus exists over the definition of "error rate," since arguably, no error rate exists if it is corrected before a prescription is released to the patient. All firms report infinitesimal rates of reported errors from patients or physicians.

Finally, mail service pharmacies conform to industry standards for maintaining the integrity of their inventory. These responsibilities include: developing and maintaining an inventory system for all drugs; establishing and monitoring a system to insure proper storage conditions for perishable items; developing and maintaining a system for the regular removal from storage areas of all pharmaceutical items that are outdated or whose manufacture has been discontinued; maintaining a record of controlled substances and poisons received and dispensed; and preparing and reviewing purchase orders. The packaging procedures that we observed were in accord with industry standards. All mail service pharmacies utilized auxiliary labels, which would include those related to instructing patients on protecting product stability.

Other Pharmacist Patient-Care Functions

While activities related to dispensing the prescription are clearly central to the evaluation of the quality of pharmacy services in mail service pharmacies, they are not the only ones. The most controversial aspects related to quality revolve around patient-related functions. Not all pharmacists do all of the activities related to all of the responsibilities outlined in the Standards of Practice; some activities seem to be specific to certain sites of practice. For example, the lack of access to much patient and disease-related information by pharmacists in community settings discourages or makes impossible continuous therapeutic monitoring. Thus, part of the controversy over the quality of pharmacy services in mail service industry actually relates to whether the pharmacy is in a position to perform some activities at all, and whether it must perform all activities to qualify as a participating pharmacy provider.

The issues principally relate to patient counseling. The MCCA requires participating pharmacy providers "to offer to counsel, or offer to provide information" regarding prescriptions dispensed. Mail service pharmacies may meet the offer to provide information requirement by package inserts provided with the drugs dispensed. However, as noted earlier, the use of such inserts was highly variable among the firms surveyed, with one firm distributing leaflets for a majority of the drugs dispensed and another only providing inserts as required by law.

The issue of patient counseling is controversial because the MCCA does not define the precise nature of counseling that must be available to beneficiaries. To substitute for their inability to counsel face-to-face, all mail service pharmacies in the survey had 800 numbers for use by patients and plan participants. While face-to-face contact is presumed to be superior to communicating by telephone, there are instances where privacy concerns and discussion of intimate matters may be better discussed over the telephone where there is less opportunity for the conversation to be overheard. Also, mail service pharmacies contend that offering to counsel is different from actually counseling, and that their telephone system is comparable to the availability of counseling in a community pharmacy, where face-to-face contact may not not take place because a clerk rings up the sale or a representative picks up the prescription. Most physician consultation in the community is by telephone, and it is unlikely that the quality of a telephone conversation

differs whether it is local or long distance. Mail service pharmacies pointed out that counseling is most useful on initiation of new therapy, but most prescriptions that will be dispensed to MCCA recipients will be for maintenance medications that the patient has taken for months or years.

Conclusion

There is no reason to believe that drug product quality varies between mail service pharmacies and other types of pharmacy outlets. Mail service pharmacies appear to adhere to the Standards of Practice related to the process of dispensing a prescription. There is no evidence that the rate of prescriptions containing a dispensing error that reach the patient is any different from any other type of pharmacy practice. There is almost no information available on this other than anecdotal evidence.

Because of the high volume of mail service pharmacies, it is possible to design carefully crafted controls over the quality of the dispensing process. The large mail service firms in particular have designed systems that use computer-based information systems, automated tablet counting devices, technical personnel, and pharmacists for checking and supervising at strategic points to facilitate highly efficient and safe dispensing. As with any high volume operation, it is difficult to determine whether the system always works as intended. Pharmacists still play a critical role in the system. A computer can only prompt for specific potential problems, such as drug-drug interactions or drug overdoses; the information system is only as good as the data entered. The systems certainly compare favorably with community pharmacy operations whose size generally precludes checking by two or more pharmacists.

B. Legal Issues

The MCCA establishes requirements for pharmacies which elect to participate in the outpatient program. Some of the requirements discussed in Chapter I may have special implications for mail service pharmacies.

Conditions of Participation

Prescription Charges: Civil monetary penalties may be imposed on either participating and nonparticipating pharmacies that charge beneficiaries more than they charge the general public. Since mail service pharmacies generally sell to employer groups rather to the general

public and usually have different prices depending on the terms of specific contracts, the applicability of this concept to mail service is problematic. Pharmacies which routinely provide prescriptions at discount prices to specific groups could incur compliance problems. Since the MCCA provides for the Secretary to issue regulations to implement this provision, consideration could be given to drafting regulations that exclude individuals involved in a group buying plan from the definition of general public.

Audits: A participating pharmacy must subject itself to periodic audits. This is a common arrangement between providers and third-party payers and is based on the contractual relationship. The participating pharmacy would be required to maintain adequate documentation of amounts expended for drugs and of the usual and customary amount charged to non-Medicare customers.

Electronic Point of Sale: Pharmacies must submit information on all drug product purchases by beneficiaries through the electronic system. Since most mail service pharmacies are computerized, compliance with this particular aspect of the law should not be problematic. There may, however, be issues related to specification of the electronic point of sale system, for example, provision for batch processing.

Compatibility with State Pharmacy Laws

A condition for participation is that a pharmacy be licensed under State law. State pharmacy laws vary in complexity, may be inconsistent with one another, and lack uniformity. (Angorn and Cannon, 1985)

Counseling: A participating pharmacy must offer to counsel or provide information, consistent with State laws respecting the provision of such information. State laws on patient counseling vary considerably. Some States require that a pharmacist counsel patients, while some allow someone working under a pharmacist's direction to counsel patients. Other States require that a pharmacist be available for consultation, and some require that this be advertised to the public. Many States mandate the content of counseling. The MCCA requires some specific items be included within the definition of counseling, and counseling will have to include at least these elements, or more as required by State law. Whether the use of an 800 phone number and package inserts meets State counseling requirements may be an issue in some States.

Staffing Requirements: The use of technical personnel may emerge as an issue on the ability of a mail service pharmacy to participate. There may be conflicts between the laws of the provider State and the recipient State. In general, a pharmacy technician is someone who, under the supervision of a licensed pharmacist, assists in various technical activities of the pharmacy which do not require the immediate judgment of a pharmacist. Some States may not define the role of technicians, while others will specify the tasks which a technician is allowed to do. Regardless of how these tasks are defined, the technician must be supervised by a pharmacist who is responsible for the work of that technician.

State laws also vary on training, licensure, and certification of technicians. Approximately five States require training for technicians while seven States require some type of licensing or certification. If a recipient State's laws on certification or training should vary from those in the provider State, the provider pharmacy may in fact be required to comply with the recipient State's laws or risk not being able to send prescriptions into that State.

The ratio of registered pharmacists to technical personnel is an issue for potential State-to-State differences. Some States have no requirements with regard to this ratio. Others may have a vague requirement that the ratio be sufficient to provide adequate pharmaceutical care. Some States, however, have numerical requirements on the pharmacist to technician ratio. By far, the most common ratio is one technician for every one pharmacist. A few States allow ratios higher than this and these may be tied to specific tasks. Thus, mail service pharmacies which conduct interstate business must not only be concerned with complying with ratios, but must also comply with the definition of technical personnel in each State to which they mail prescriptions.

Sending/Receiving State: Regardless of the specific regulations or laws which a pharmacy must meet, a major issue is whether a mail service pharmacy can meet the requirements of the law by adhering only to the laws of the State in which the pharmacy itself is situated. States have promulgated laws concerning the practice of pharmacy which are designed to protect the welfare, health and safety of residents of that State. Generic substitution laws are a prime example. They vary somewhat from State to State.

Several States prohibit mailing prescriptions into the State for State residents by an out-of-State pharmacy, unless the pharmacy is registered in the recipient State and adheres to all of the State's laws and regulations. Some recipient States require an out-of-State mail service pharmacy to have in its full-time employ a pharmacist licensed to practice in the recipient State. At least one State prohibits all mailing of prescriptions, either into, out of, or within the State. Another State prohibits a pharmacy from doing more than 15 percent of its business in mail service from mailing prescriptions into the State.

The potential market created by MCCA may encourage court challenges to such laws and regulations. At issue would be whether regulation of prescription sales to persons in recipient States is a valid exercise of State police power to protect the health and welfare of the public, and whether State laws on mail service pharmacies discriminate against or impose an undue burden on interstate commerce.

The National Association of Boards of Pharmacy has developed model regulations for out-of-State pharmacies. These regulations present a rational approach to dealing with the issue of individual State laws and mail service pharmacies. Essentially, under the model regulations, a mail service pharmacy is required to adhere to the laws of the recipient State unless in doing so the pharmacy would violate the laws of the State in which it is situated. This would mean that, in most cases, the mail service pharmacy would be required to adhere to the more stringent law. It is doubtful that the mail service pharmacy would be unable to do this. Other key features of the model regulations would include registration of the mail service pharmacy in the recipient State, designation of an individual employed by the mail service pharmacy who agrees to accept service of process, and use of the State board of pharmacy in the provider State as the first line of offense in dealing with violations of the laws or regulations of the recipient State. The next step in this process, however, would be for each individual State to adopt the model regulations and incorporate them into their own State laws. This can be a time-consuming process, taking many years. However, there is certainly precedent for it, for example, the Uniform Commercial Code.

At this time, there are many barriers to smooth compliance of mail service pharmacies with the laws of every State into which they mail prescriptions. However, mail service pharmacies should be able to comply, perhaps with some difficulty. All indications suggest that recipient States

are likely to become more vigilant in enforcing their laws. States' rights are strong, especially with regard to protection of the health and welfare of their residents. The practice of pharmacy is governed by State laws. Since Medicare is essentially an insurance program and not a government-provided service, such as the Veterans Administration, State laws will continue to control the practice of pharmacy notwithstanding the fact that the Federal Government is paying part of the bill.

C. Mail Service Pharmacy Concerns About MCCA

One of the results of the site visits was to provide an opportunity for the mail service pharmacies to express their concerns and opinions regarding the MCCA. Many of their concerns apply equally to community pharmacies and are not specific to mail service.

Most mail service pharmacies are interested in providing prescription drug products under the MCCA. The elderly, especially retirees who use mail service pharmacies as part of their employers drug benefit package, constitute an important source of sales. The willingness to become a participating pharmacy depends on the specific terms that the HCFA establishes regarding mail service pharmacies, although most pharmacies who participated in the survey were favorably disposed toward participation. Only one pharmacy, which eventually withdrew from the study, stated that it did not expect to become a participating pharmacy.

Concerns Regarding Being a Provider

- Most mail service pharmacies do not market to individuals, but rather obtain customers through group contracts. Many pharmacies wondered whether HCFA would make any provisions to assist in marketing to individuals.

- The standard days supply for mail service pharmacies appears to be 90 days. The MCCA currently limits the supply to 30 days, although this may be adjusted by the Secretary of HHS. Mail service pharmacies view the 30-day supply as not encouraging cost savings and they would like to see the limit increased to 90 days for maintenance drugs.

- Price updating biannually seems much too infrequent. Many pharmacies now update their pricing every two weeks. Related to this is that at some point during the year, pricing could be 12 months old, thus not reflecting current acquisition costs.

Concerns Regarding Being a Participating Pharmacy

- The mail service pharmacies view the on-line or real time processing requirement as unnecessary, given the nature of their delivery system which does not require an immediate response because the patient is not waiting on the premises. There was a strong preference for batch-bill processing.

- In mail service pharmacies, the prescription processing operation is broken into components. Since the pharmacist performing prescription screening and drug utilization review does not perform other tasks, a rapid response time for on-line transactions is essential for an efficient mail service operation.

- Suggestions for an alternative to the MCCA payment formula include a competitive bidding process to become a regional pharmacy for Medicare, much the same way that some mail service pharmacies now bid for employer contracts, or use of the negotiated price formula in use for the largest contract of a given mail service pharmacy.

CHAPTER VII

CONCLUSIONS

Overall, the data obtained as part of this study indicate that mail service pharmacies provide a viable alternative system for the delivery of maintenance or chronic-prescribed medicines. Mail service pharmacy currently accounts for a relatively small proportion of the outpatient prescription drug market, less than 6 percent, although this is projected to increase substantially over the next 5 years. Since approximately one-half of mail service pharmacy sales are to the over 65 population, mail service pharmacies are already being used by Medicare beneficiaries, either through their retiree health benefits or through membership in an organization that allows access to a mail service pharmacy.

The quality of both the drug products dispensed and the pharmacy services provided by the mail service pharmacies studied appears to meet generally accepted pharmacy standards of practice. The offer-to-counsel requirement of the MCCA appears to be met through written information mailed with the prescription and the availability of toll-free telephone consultation for questions.

Many of the cost impact analyses that were planned could not be conducted because the majority of pharmacies in the study sample declined to share detailed cost information. Thus, no definitive statement regarding the potential to use mail service pharmacies to reduce costs to the Medicare program can be made. Although the mail service industry claims to offer cost savings over community pharmacies in the delivery of prescription drugs, adequate data were not provided to verify this assertion. Data that were supplied suggest that the average costs per days supply are in the same range as published estimates for community pharmacies. There is some evidence that mail service pharmacies do have a higher generic substitution rate than published estimates for community pharmacies; however, the MCCA, through an upper limit on payment for multiple source drug products, should equalize this difference.

The payment formula used in many mail service pharmacy group contracts, AWP less a discount plus an administrative fee, suggests that actual drug acquisition costs for some mail service pharmacies are below AWP. However, the amount of such discounts could not be determined in this study. While the

MCCA prohibits considering pharmacy discounts in determining the unit average price for drug products, the average amount of mail service pharmacy discounts could be considered in determining an appropriate administrative allowance for mail service pharmacies.

Furthermore, mail service pharmacies will probably interface with the MCCA electronic point-of-sale system in a batch-processing mode, which should result in lower overhead costs than a community pharmacy on-line system. Because this study was not successful in getting sufficient quantitative information to determine actual acquisition or overhead costs, it is recommended that mail service pharmacies be included in the General Accounting Office's studies to determine overhead costs of retail pharmacies and discounts given to third-party insurers, as required by section 202(k)(2) of the MCCA.

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APPENDIX A

LIST OF MAIL SERVICE PHARMACIES

Accuscript
Stokeld Health Services
3440 38th Avenue
Moline, IL 61265

Action Mail Order
Laverdiere's Super Drugs
P.O. Box 1014
Waterville, ME 04901

Allied Home Pharmacy
P.O. Box 3214
Abilene, TX 79604

America's Pharmacy
P.O. Box 1990
Newport Beach, CA 92658

American Prescription Plan
CS 620
Garden City, NJ 11530-9814

ARC Ventures
910 W. Van Buren, Suite 300
Chicago, IL 60607

Baxter Prescription Service
625 Barclay Blvd.
Lincolnshire, IL 60069

Centralfill
P.O. Box 141
Lemoyne, PA 17043

Choice Drug Systems
457 Doughty Boulevard
Inwood, NY 11696

Custom Prescription Service
11704 Lackland Industrial Drive
St. Louis, MO 63146

CliniShare's Direct Rx
20600 Nordhoff
Chatworth, CA 91319

Ellingson's Pharmacy
P.O. Box 4463
Portland, OR 97208

Mailscripts
393 East Town Street, Suite 120A
Columbus, OH 43215

Medco
1900 Pollitt Drive
Fairlawn, NJ 07410

Medi Mail
P.O. Box 18503
Las Vegas, NV 89114

Nationwide Prescription Service
CS 2080
Valley Stream, NY 11582

Pharmacy Management Services
3311 Queen Palm Drive
Tampa, FL 33619

Preferred Presciptions
P.O. Box 32513
Kansas City, MO 64111

Prescription Delivery Systems
49 South York Road
Hatboro, PA 19040

Retired Persons Services
American Association
of Retired Persons
1 Prince Street
Alexandria, VA 22314

Revco Drug Stores
1925 Enterprise Parkway
Twinsburg, OH 44087

Rite Aid Corp.
P.O. Box 3165
Harrisburg, PA 17105

Schuman's Worldwide Rx Service
1200 Welsh Road
North Wales, PA 19454

Special Services Pharmacy
10200 Southeast Sunnyside Road
Clackamas, OR 97015

Standard Drug
1814 North Division Street
Spokane, WA 99207

Employee Pharmaceutical Inc.
85 Executive Boulevard
Elmsford, NY 10523

Express Pharmacy Services
Thrift Drug Company
615 Alpha Drive
Pittsburgh, PA 15238

Express Scripts, Inc.
P.O. Box 27667
St. Louis, MO 61346

Family Pharmaceuticals
P.O. Drawer 1288
Mt. Pleasant, SC 29464

Feld Drug
5023 Grover Street
Omaha, NE 68106-9990

Flex Rx Prescription Services
P.O. Box 11591
Pittsburgh, PA 15238

Health Care Services
101 West City Line Avenue
Bala Cynwyd, PA 19004

Home Shopping Network
P.O. Box 9090
Clearwater, FL 34618-9090

Long Drug Stores
141 North Civic
Walnut Creek, CA 94596

MailMed/Prescription Plan Service
500 8th Avenue
NYC, NY 10018

Mail Order Medicine (Walt Bain)
P.O. Box E
Farmington, UT 84025

Mail Order Pharmacy
2020 North 72nd, Suite 2
Omaha, NE 68134

Uni-Med Services
P.O. Box 510
Sunset, LA 70584

Walgreen's Contract Pharmacy Outlet
200 Wilmont Road
Deerfield, IL 60015

APPENDIX B

MAIL QUESTIONNAIRE

SURVEY OF MAIL SERVICE PHARMACIES

This survey concerns the extent and organization of mail service pharmacies in the United States. Policymakers in Congress need to understand the potential for mail service pharmacies under the new Catastrophic Health Care legislation. The questions in this survey address characteristics of plans provided by mail service pharmacies, operating procedures, financial guidelines and prescription pricing methods.

Please try to answer all questions. When a question does not apply to your organization, indicate Not Applicable or N.A. on the questionnaire or put a note in the margin.

SIZE AND COMPLEXITY OF ORGANIZATION

In this first section of the questionnaire, we would like to gather information about the size and complexity of your mail service pharmacy. Where appropriate, please fill in the blank or circle the correct answer.

S1. How many separate contracts for mail service prescriptions does your company have with client groups (not individuals)? _____

S2. Can individuals who are not covered by a client contract use your services?

1. YES
2. NO

S3. Do you have relationships with any affinity groups? We define affinity groups to mean groups with a common interest, such as a patient group or association.

1. YES (Please specify) _____
2. NO

S4. In December 1988 how many total individuals, including those who are served by group contracts and any individuals not under group contract, were eligible to use your services? How many individuals used your services?

Individuals	Eligible	Used
1. INDIVIDUALS UNDER GROUP CONTRACTS	_____	_____
2. INDIVIDUAL MEMBERS OF AFFINITY GROUPS	_____	_____
3. INDIVIDUALS NOT COVERED THROUGH AFFINITY GROUPS OR UNDER GROUP CONTRACT		_____

S5. How many of your customers were 65 or older? _____ _____

S6. How many of your customers were younger than 65? _____ _____

S7. How many prescriptions were sold to people 65 or older? _____

S8. How many prescriptions were sold to people younger than 65? _____

S9. Please name the State(s) and check whether you have a dispensing site and/or a pharmacy license there.

State	Number of Dispensing Sites	License
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

CONTRACT OPTIONS

Client groups may offer a wide variety of prescription drug benefits. These benefits require that you provide a variety of contract options to your clients. Please indicate both the number of contracts with this option and the number of eligible beneficiaries enrolled under that option as of December 1988.

	CONTRACT OPTIONS	NUMBER OF CONTRACTS WITH THIS OPTION	NUMBER OF ELIGIBLES ENROLLED
C1.	Consumer participation is		
	1. MANDATORY	_____	_____
	2. OPTIONAL	_____	_____
C2.	Consumer cost-sharing through		
	1. DEDUCTIBLES (e.g., $100/yr)	_____	_____
	2. COPAYMENTS (e.g., $3.00/Rx)	_____	_____
	3. COINSURANCE (e.g., 20%/Rx)	_____	_____
C3.	Contracts with brand/generic differential in customer cost-sharing	_____	_____
C4.	Provide written drug information for consumers (leaflets)	_____	_____
C5.	Perform computerized prescription screening (e.g., screening for drug interactions and allergies)	_____	_____
C6.	Limit the maximum days supplied to the following quantities (excluding exceptions)		
	1. 30 DAYS	_____	_____
	2. 60 DAYS	_____	_____
	3. 90 DAYS	_____	_____
	4. MORE THAN 90 DAYS	_____	_____
	5. OTHER	_____	_____

CONTRACT OPTIONS	NUMBER OF CONTRACTS WITH THIS OPTION	NUMBER OF ELIGIBLES ENROLLED	TYPICAL RANGE OF DISCOUNTS AND/OR FEES	
			DISCOUNTS	FEES
C7. Offer various reimbursement formulas				
1. AWP + fee	_____	_____	_____	_____
2. AWP - discount	_____	_____	_____	_____
3. AWP - discount + fee	_____	_____	_____	_____
4. CAPITATION CONTRACTS				
(e.g., $4/member/month)	_____	_____		
5. PER PRESCRIPTION REIMBURSEMENT				
(e.g., $4/prescription)	_____	_____		
C8. Set maximum allowable cost for generic or therapeutic products?				
1. GENERIC PRODUCTS	_____	_____		
2. THERAPEUTIC PRODUCTS	_____	_____		

OPERATING PROCEDURES

The next pages inquire about your operating procedures in filling prescription orders through your mail service operation. Please fill in the requested information for calendar year 1988 (CY88).

P1. What was the total number of prescriptions your company dispensed? _____

P2. What percent were new prescriptions? _____ %

P3. What percent were for refill prescriptions? _____ %

P4. Do you require that all prescriptions be updated annually?

1. YES _____

2. NO _____

P5. What percent were for controlled substances? _____ %

P6. What percent were for patients 65 years or older? _____ %

P7. What percent were filled with generic products? _____ %

P8. What percent required contacting physician by telephone? _____ %

P9. What percent required contacting patient by telephone? _____ %

DISTINCT DRUG ENTITIES

For purposes of this survey we are defining a DISTINCT DRUG ENTITY as a unique drug product with a specific strength and dosage form and supplier. For example, the following products would be classified as six DISTINCT DRUG ENTITIES (different package sizes do not matter):

Ampicillin capsules 250 mg	Omnipen capsules 250 mg
Ampicillin capsules 500 mg	Omnipen capsules 500 mg
Ampicillin oral suspension 125 mg/ml	
Ampicillin oral suspension 250 mg/ml	

Counting your inventory according to this definition

P10. How many DISTINCT DRUG ENTITIES do you routinely stock? _____

P11. Do you routinely stock any of the following items? (Please check as many as apply to your company.)

ITEMS	STOCK
1. REFRIGERATED ITEMS	_____
2. LIQUIDS	_____
3. SCHEDULE II PRODUCTS	_____
4. OTHER CONTROLLED SUBSTANCES	_____

P12. Do you use automated tablet counting equipment?

1. NO (Go to Question P15)
2. YES

P13. What is the total percentage of your prescriptions dispensed using the automated equipment? _____ %

P14. Please check if the automated tablet counting equipment is used For those that apply, indicate what percentage of prescriptions are dispensed in this manner.

	DISPENSES IN THIS MANNER	PERCENT DISPENSED
1. AUTOMATED DISPENSING INTERFACED WITH COMPUTER	_____	_____ %
2. AUTOMATED DISPENSING NOT INTERFACED WITH COMPUTER	_____	_____ %
3. EQUIPMENT USED FOR PREPACKAGING	_____	

For Calendar Year 88 (CY88), please indicate

P15. The total number of orders filled (An order is assumed to include all the prescriptions sent in one mailing.) _____

P16. The average number of prescriptions per order _____

P17. The average shipping cost per order (e.g., postage or UPS charges) _____

P18. Percentage of orders shipped by

a. U.S. Mail _____ %

b. United Parcel Service _____ %

c. Other (Please specify) _____ %

_____

_____

P19. Percentage of orders lost in transit or undelivered _____ %

P20. What is your average turnaround time to get an order out the door? _____ hours

PRESCRIPTION OPERATIONS

In this section, we would like information about your prescription operations. Please fill in the requested information or circle the appropriate answer.

X1. What is the total number of registered pharmacists you employed?

January 1, 1988 _____ June 1, 1988 _____ January 1, 1989 _____

Using January 1, 1989 as a reference point, please indicate the number of pharmacists who worked full-time (more than 32 hours per week) and the average number of hours per week they work. Please give the same information for part-time pharmacists (those who work less than 32 hours per week).

	PHARMACISTS	NUMBER	AVG HRS WK
X2.	Full-time pharmacists	_____	_____
X3.	Part-time pharmacists	_____	_____

X4. What is the average number of prescriptions dispensed per hour per on-line pharmacist? _____

X5. What is your target number of prescriptions to be dispensed per hour per on-line pharmacist? _____

X6. What is the average FTE salary for all pharmacists you employ? _____

X7. Please check if you offer a bonus or salary enhancement to pharmacists. _____

If you do, please explain.

_____

_____

_____

_____

Please indicate the number of pharmacy technicians that work full-time (more than 32 hours per week) and the average number of hours per week they work. Please give the same information for part-time pharmacy technicians (work less than 32 hours per week).

PHARMACY TECHNICIANS

XT1. What is the total number of pharmacy technicians you employed:

January 1, 1988 _____ June 1, 1988 _____ January 1, 1989 _____

	NUMBER	AVG HRS WK
XT2. Full-time pharmacy technicians	_____	_____
XT3. Part-time pharmacy technicians	_____	_____

XT4. What is the average full-time equivalent (FTE) salary for all pharmacy technicians you employ? _____

XT5. Please check if you offer a bonus or salary enhancement to pharmacy technicians. _____

If you do, please explain.

_____

_____

_____

_____

Please indicate the number of support personnel that work full-time (more than 32 hours per week) and the average number of hours per week they work. Please give the same information for part-time support personnel. Support personnel are defined as all nonpharmacist and nontechnician personnel involved in the dispensing process.

SUPPORT PERSONNEL

XS1. What is the total number of support personnel you employed?

January 1, 1988 _____ June 1, 1988 _____ January 1, 1989 _____

	NUMBER	AVG HRS WK
XS2. Full-time support personnel	_____	_____
XS3. Part-time support personnel	_____	_____

XS4. What is the average FTE salary for all support personnel you employ? _____

PATIENT COUNSELING

In this section we would like information about your patient information and counseling capabilities. Please circle appropriate answer.

PC1. Do you provide written drug information with the prescriptions you dispense?

1. YES, ROUTINELY
2. YES, UPON REQUEST
3. NO

PC2. What patient information system do you use? (Circle the number to as many answers as apply)

1. AMA – Patient Medications Instructions
2. USPDI – Patient Information
3. Other (Please specify)

_____

_____

PC3. For how many drugs do you have patient leaflets? _____

PC4. What is your 800 number for PATIENT inquiries? _____

PC5. On average, how many hours per week are your 800 lines staffed for patient inquiries? _____ hrs/wk
(e.g., 10 lines x 24 hrs. x 7 days = 1680 hrs./wk.)

PC6. Who staffs it? _____

_____

PC7. On average, how many calls a week do you answer? _____ calls/week

PC8. What is your company goal for the percent of calls answered of those you receive? _____

PC9. What percent of calls are from PATIENTS concerning medical or drug questions? _____ %

PC10. What percent of calls are questions about delivery of orders, cost, or other administrative questions? _____ %

PC11. What percent of calls are refill prescription orders? _____ %

PC12. What other types of questions are asked by PATIENTS on the 800 line?

_____

COMMUNICATIONS WITH PHYSICIANS

CP1. Please indicate if you have an 800 line for questions to or from physicians and write in the number.

1. YES, HAVE AN 800 PHYSICIAN NUMBER _____

2. NO, NO 800 PHYSICIAN NUMBER (Please go to Question F1)

CP2. On average, how many hours a week are your 800 lines staffed for PHYSICIAN inquiries?
(e.g., 5 lines x 12 hrs. x 7 days = 420 hrs./wk.) _____ hrs./wk.

CP3. Who staffs it?

_____

_____

CP4. How many calls a week do you receive from physicians on your 800 lines? _____ calls/wk

CP5. How many of these calls are in response to inquiries initiated by the pharmacy? _____

CP6. What other types of questions do PHYSICIANS ask on the 800 line?

_____

_____

_____

FINANCIAL DATA

To evaluate the cost to the government of the new Medicare drug benefit, we ask you to respond to the following financial questions. These questions apply to your mail service pharmacy division only.

F1. What was your total revenue (sales) from mail service pharmacy in CY88? _____

F2. Total cost of goods sold _____

F3. Average inventory in dollars _____

F4. CY88 inventory turnover rate _____

F5. Percentage gross margin _____

F6. Average days supply dispensed per prescription _____

F7. Average prescription selling price _____

F8. Average prescription net acquisition cost (NOT AWP or internal warehouse charge) _____

F9. What percentage of your total revenues do the following expense categories represent:

1. Pharmacist salaries _____ %

2. Other salaries _____ %

3. Fringe benefits _____ %

4. Rent/interest _____ %

5. Capital and equipment (e.g., depreciation or amortization) _____ %

6. Telephone _____ %

7. Bad debts _____ %

8. Shipping and handling expenses _____ %

9. All other expenses _____ %

F10. What percent did your total revenue grow between CY87 and CY88 _____ %

COMPUTER APPLICATIONS

We are also interested in how you use computers in your business. The following section asks about your computer capability.

CM1. When was your present computer system first installed?

_____/_____month/year.

CM2. Which configuration best describes the computer system used to support dispensing of prescriptions?

a. _____ stand alone (micro computers)

b. _____ on-line (time-shared)

c. _____ Hybrid stand alone linked to main frame

d. _____ Other, explain _____

_____

_____

CM3. Do you use a computer to maintain patient prescription profiles?

a. _____ Yes b. _____ No

CM4. Computers can be used for a number of functions related to the dispensing process. Please check all functions which are performed by computer at your mail service pharmacy.

a. _____ Print prescription label
b. _____ Print auxiliary warnings
c. _____ Print patient information sheets
d. _____ Print mailing labels
e. _____ Prepare filling lists
f. _____ Patient medication profiles
g. _____ Control dispensing cells
h. _____ Formulary control
i. _____ Eligibility screening
j. _____ Credit card validation (point-of-sale)
k. _____ On-line claims adjudication (point-of-sale)
l. _____ Prescriber registry
m. _____ Product price updates
n. _____ Automatic inventory order list
o. _____ Electronic inventory ordering
p. _____ Screen for allergies
q. _____ Screen for drug interactions
r. _____ Screen for dosage
s. _____ Screen for premature refills
t. _____ Screen for late refills
u. _____ Screen for duplicate therapy
v. _____ Drug utilization Review
w. _____ Other _____
x. _____ Other _____

CM5. Do you routinely request a medication or medical history from new patients?

a. _____ Yes (Please enclose a copy of your data collection form when you return this survey.)

b. _____ No (Go to Question CM8.)

CM6. What percentage of patients return a completed form? _____ %

CM7. Which of the following prescriptions does your patient profile system include? (Check all that apply.)

a. _____ Prescriptions from the dispensing site.

b. _____ All prescriptions dispensed by any site related to your company.

c. _____ Prescriptions from any source dispensed to patient.

PRESCRIPTION COSTS

CO1. Please provide a COMPUTER PRINTOUT of the following information for the 100 top selling drug products during CY88. Please rank order them in descending order of total dollar sales (or reimbursement).

The following information is desired:

(1) Rank
(2) Drug name, strength, dosage form
(3) Total $ sales
(4) Total number of prescriptions
(5) Average selling price (reimbursement) per prescription
(6) Average prescription quantity (units)
(7) Average net acquisition cost per prescription (not AWP or internal warehouse charge).

CO2. For the following prescriptions, please provide: (1) Your current selling price (reimbursement) to your largest contract and (2) Your most recent net acquisition cost (not AWP or internal warehouse cost).

Single Source Products:	SELLING PRICE FOR LARGEST CONTRACT	AVERAGE NET ACQUISITION COST
1. Aldomet tabs 250 mg # 100	_____	_____
2. Dyazide caps # 100	_____	_____
3. Coumadin tabs 5 mg # 100	_____	_____
4. Synthroid tabs 0.1 mg # 100	_____	_____
5. Nitro-Dur SR patches 10 mg # 90	_____	_____
6. Verapamil SR tabs 240 mg # 100	_____	_____
7. Feldene caps 20 mg # 30	_____	_____
8. Premarin tabs 0.625 mg # 100	_____	_____
9. Zantac tabs 150 mg # 100	_____	_____

10. Lanoxin tabs 0.25 mg
    # 100 _____ _____

11. Aldoril tabs 25 mg
    # 100 _____ _____

12. Capoten tabs 25 mg
    # 100 _____ _____

13. Slow-K tabs 8 meq
    # 100 _____ _____

14. Xanax tabs 0.5 mg
    # 100 _____ _____

15. Theo-Dur SR caps 300 mg
    # 100 _____ _____

16. Bactrim tabs double str.
    # 40 _____ _____

17. Halcion tabs 0.25 mg
    # 30 _____ _____

18. Keflex caps 500 mg
    # 40 _____ _____

19. Darvocet-N tabs 100 mg
    # 30 _____ _____

C03. Multiple Source Products (specify manufacturer/labeler source for each):

	SELLING PRICE	AVERAGE NET ACQUISITION COST	SOURCE
1. Acetaminophen with codeine #3 30 tabs	____	_____	____
2. Dypyridamole tabs 50 mg 100	____	_____	____
3. Furosemide tabs 40 mg 100	____	_____	____
4. Hydrochlorothiazide tabs 50 mg 100	____	_____	____
5. Prednisone tabs 5 mg 100	____	_____	____
6. Sulfamethoxizole/Trimethoprim double str. 40	____	_____	____

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